Infinity

INTERMEZZO 4.1t

POWERED LOUDSPEAKER

SERVICE MANUAL

Infinity Systems, Inc.
250 Crossways Park Dr.
Woodbury, New York 11797

REV 4 5/2005

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Intermezzo 4.1t Specifications

Frequency Response:	23Hz – 22kHz (±3dB) 30Hz – 20kHz (±1.5dB)
Impedance:	6 ohms
Sensitivity:	87dB (1 watt @ 1 meter)
Max Amp Power:	500 watts*
Subwoofer Amp Output:	850 watts RMS; 2600 watts peak (with 0.1% THD or less)
2nd- and 3rd-Order Harmonic Distortion:	<1% (20Hz – 20kHz @ 95dB SPL)
Crossover Frequencies:	80Hz, 500Hz, 2800Hz – 24dB/Octave
Dimensions:	51-1/2" x 12-1/2" x 27-1/8" (1308mm x 318mm x 689mm)
Weight:	93 lb/42.3kg (each)

*The maximum recommended amplifier power rating will ensure proper system headroom to allow for occasional peaks. We do not recommend sustained operation at these maximum power levels.

Infinity continually strives to update and improve existing products, as well as create new ones. The specifications and details in this manual and related Infinity publications are therefore subject to change without notice.

Detailed Specifications

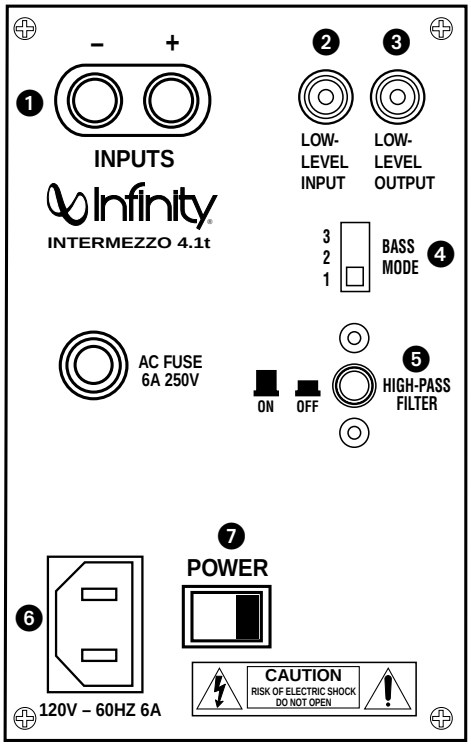
LINE VOLTAGE	Yes/No	Hi/Lo Line	Nom.	Unit	Notes
US 120vac/60Hz	Yes	108-132	120	Vrms	Normal Operation
EU 230vac/50 – 60Hz	Yes	207-264	230	Vrms	Normal operation, MOMS required
Parameter	**Specification**	**Unit**	**QA Test Limits**	**Conditions**	**Notes**
Amp Section					
Type (Class AB, D, other)	AB	---		HC-BASH Power Supply	
Load Impedance (speaker)	8	Ohms		Nominal	Resistor Load
Rated Output Power	1000	Watts	850	@ 30Hz, THD 15%, Limiter defeated	
THD@ 680W	1	%	5	22k filter, 30Hz, LPF “Off”	
THD @ 1 Watt	0.05	%	0.3	22k filter, 30Hz, LPF “Off”	
Polarity (Input vs Output)	0	deg.	0° ±20	@ 30Hz; LPF “Off”	.250 faston (+)……205 faston (-)
DC Offset	1	mV-DC	1.5	@ Speaker Outputs	
Damping factor	> 50	DF			
Input Sensitivity					
Input Frequency	30	Hz	30	Nominal Freq.	1 input driven
Line Input	43	dBr	±2	STO 1 Watt, @30Hz	LPF “Off,” Gain Max.
Speaker/Hi-Level Input	14.5	dBr	±2	STO 1 Watt, @30Hz	LPF “Off,” Gain Max.
Signal to Noise					
SNR-A-Weighted	100	dBA	90	relative to 680W output	A-Weighting filter
SNR-unweighted	90	dBr	80	relative to 680W output	22k filter
SNR rel. 1W-unweighted	60	dBr	50	relative to 1W output	22k filter
Residual Noise Floor	2	mVrms	3	Volume @max, using RMS reading DMM/VOM (or A/P)	
Residual Noise Floor	1	mVrms (max)	3	Volume @max, w/ A/P Swept Bandpass Measurement (Line freq.+ harmonics)	
Input Impedance					
Line Input	10k	ohms		Nominal	
Speaker/Hi-Level Input	1k	ohms		Nominal	
Active Filters					
Low-Pass (fixed or variable)	fixed	--			
Frequency	80	Hz			
Slope	24	dB/Octave			
Q	0.7	Damping			
Low-Pass (fixed or variable)	fixed	--			
Frequency	24	Hz			10k-ohm resistor added in series with
Slope	6	dB/Octave			feedback cap. for shelving effect.
Q	0.7	Damping			
Subsonic Filter (HPF)	fixed	--			
Frequency	12	Hz			
Slope	12	dB/Octave			
Q	0.7	Damping			
Line-Out Filter (HPF)	fixed	--	nonswitchable		Low level output to satellites
Frequency	80	Hz			
Slope	12	dB/Octave			
Q	0.7	Damping			
High-Level Out Filter (HPF)	no	--			
Parametric EQ (BOS)					
Frequency Pot	yes	--		21 detent pot (0.1 oct. steps)	
Range	20 – 80	Hz	functional		
Level Pot	yes	--	--	21 detent pot (0.5dB steps)	
Range	0 to –14	dB	functional		
Width (Q) Pot	yes	--	--	21 detent pot (5 steps/0.1 octave)	
Range	0.05 – 0.5	octave	functional		

Detailed Specifications (cont.)

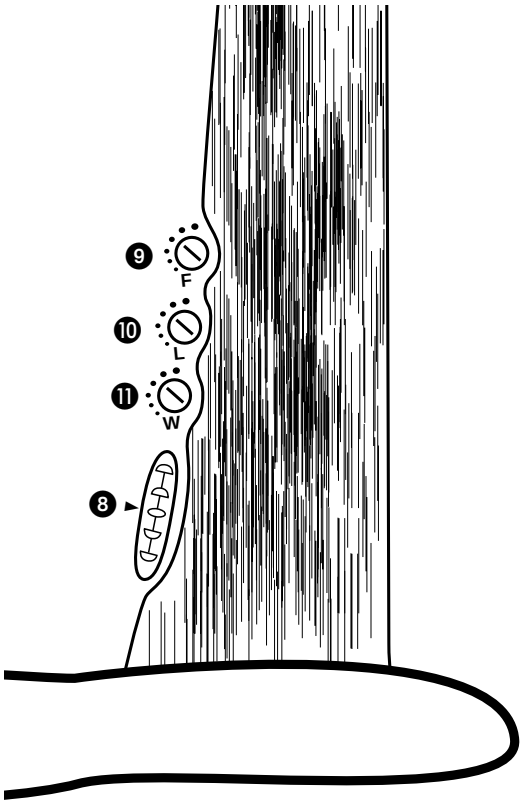
Features					
Main Power On/Off Switch	rocker	--	functional	Locate at amp plate	
High-Level High-Pass Switch or more	push button	--	functional	Locate at amp plate	Single pole, rated 10A @120V/240V,
Low-Pass Filter Switch	3-pos switch	--	functional	Locate at amp plate	
R.A.B.O.S.™ Bypass Switch	mini DC jack		functional	Locate at amp plate	O.D.: 5.0mm; I.D.: 2.1mm
Limiter (yes/no)	yes				
Output Power Limited to	680	Watts	650	THD < 5%	
Output Volume Control					
Volume Control Pot	10k	ohm		Locate at front, illuminated	
Taper (Lin/Log)	A-/C-taper	--		D-shaft pot for knob fitting	A-taper for “left”; C-taper for “right”
@Minimum Setting	no output	dB			
Input/Output Configuration					
Line-In (L, C, R, AC3, Mono)	mono	--		RCA phono jack, gold-plated	
Spkr/Hi-Level In (L, C, R, mono)	mono	--		Binding posts, gold-plated	
Line Outputs (L, C, R)	mono	--		RCA phono jack, gold-plated	High pass filtered, 2nd order
Signal Sensing (ATO)					
Auto-Turn-On (Yes/No)	yes	--		Under the condition that bias power never exceed 15W	
ATO Input Frequency	30	Hz			
ATO Level	8/100	mV	15/120	@30Hz into single Line/Speaker Input	LPF “On,” BOS “Off”
ATO Bandwidth	300	Hz	350	ATO-LPF for noise immunity	LPF “On,” BOS “Off”
ATO Turn-On Time	5	ms	10	Amp connected and AC on, then input signal applied	
Auto Mute/ Turn-Off Time	15	minutes	20	Time before muting, after signal is removed	
Power on Features					
Power on Delay Time	2	sec.	3	AC Power Applied	
Power on LED	yes	--		Bi-color LED located at front	
Normal On	green	color			
ATO	red	color		“Active”: green; “Standby”: red	
Transients/Pops					
ATO Transient	10	mV-peak	N/P	@ Speaker Outputs	
Turn-On Transient	100	mV-peak	1V-pp	@ Speaker Outputs	AC Line cycled from OFF to ON
Turn-Off Transient	100	mV-peak	1V-pp	@ Speaker Outputs	AC Line cycled from ON to OFF
Efficiency					
Standby Input Power	1.5	Watts	3	@ nom. line voltage	LED “red”
AC Power Cons.@ 1W	36	Watts	40	@ nom. line voltage	
Power Cons.@ 680W	955	Watts	1000	@ nom. line voltage	
Efficiency @ 680W	72	%	68		
Protection					
Short Circuit Protection	preferred	--	functional	Direct short at output	Compliance to HCG Reliability Test Plan
Thermal Protection	preferred	--	functional	@1/8 max unclipped Power	Compliance to HCG Reliability Test Plan
DC Offset Protection	preferred	--	functional	DC present at Speaker Out leads	Compliance to HCG Reliability Test Plan
ESD Protection	preferred	--	functional	ESD 15kV test apply to all input terminals	Compliance to HCG Reliability Test Plan
Line Fuse Rating	6	Amps		Type-T or Slo Blo	External fuse with UL/SEMKO rated holder

Controls and Connections

Rear Panel



Front Panel



❶ Speaker-Level Input

❷ Low-Level-Input Connector

❸ Low-Level-Output Connector

❹ Bass-Mode Switch

❺ High-Pass Filter Switch

❻ AC-Cord Input

❼ Power Switch

❽ Subwoofer-Level Control

R.A.B.O.S. Controls

❾ Center-Frequency Adjustment

❿ R.A.B.O.S. Level

⓫ Bandwidth Adjustment

Controls and Connections (cont.)

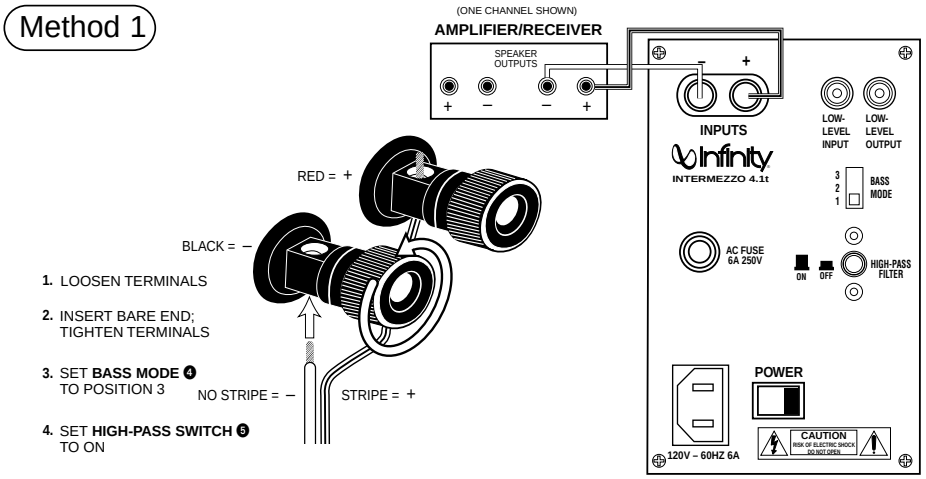
The Infinity Intermezzo 4.1t offers unprecedented flexibility for connecting the system to any type of audio or home theater system. Consult the table at right to determine which system description most closely matches your own, then follow the hookup method corresponding to that system.

If none of these system configurations seem to match yours, consult your dealer or Infinity customer service for direction on how best to hook up your system.

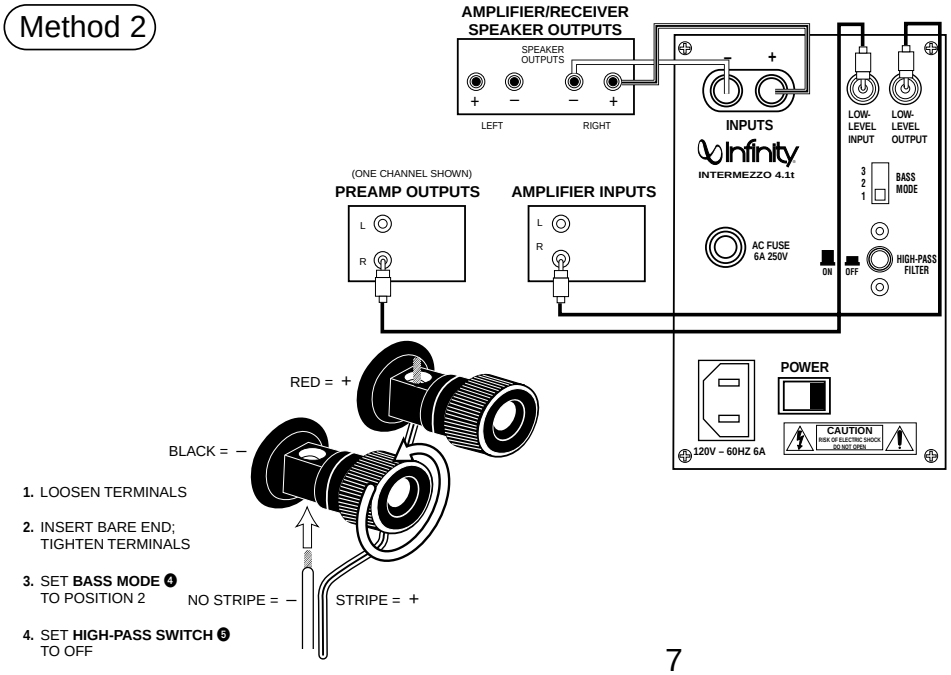
For Methods 2, 3a, 3b and 4, make sure all bass-management features are properly set. The Audio channels should all be set to “Small” or “High-Pass” and the subwoofer set to “On.”

System Type	Connection Methods
2-Channel receiver or integrated amplifier that has no subwoofer output or Pre-Out/Main-In connectors	1
2-Channel receiver or integrated amplifier with preamp output and input connectors	2
2-Channel system with separate preamplifier and power amplifier	2
Dolby Pro Logic® with THX, Dolby Digital, or DTS® receiver with a filtered subwoofer (or LFE) output connector	3a
Dolby® Digital or DTS processor with separate power amplifiers or multichannel amplifier	3b
Non-THX®-certified Dolby Pro Logic receiver with full-range subwoofer outputs	4

Method 1

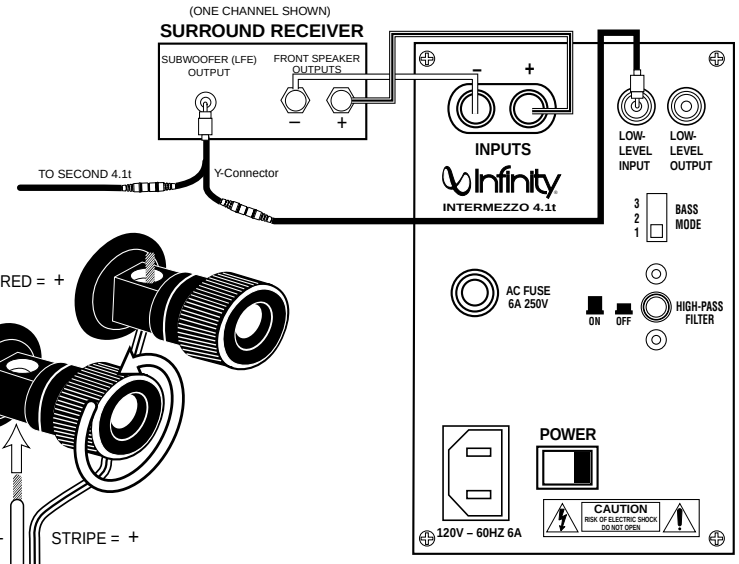


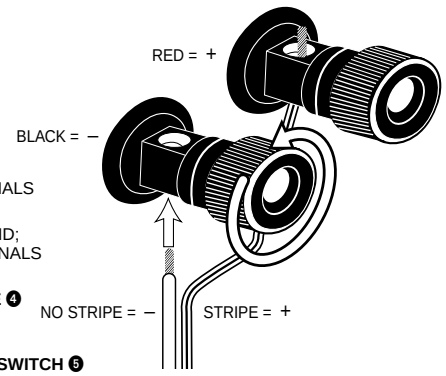
Method 2



Controls and Connections (cont.)

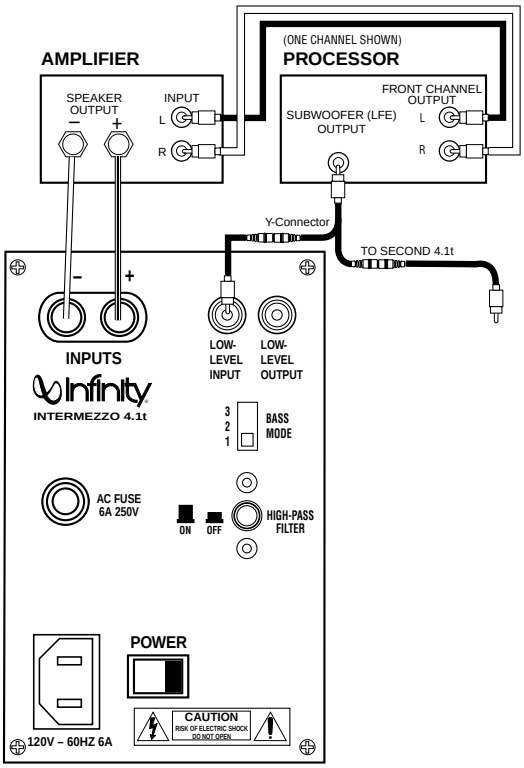
Method 3a

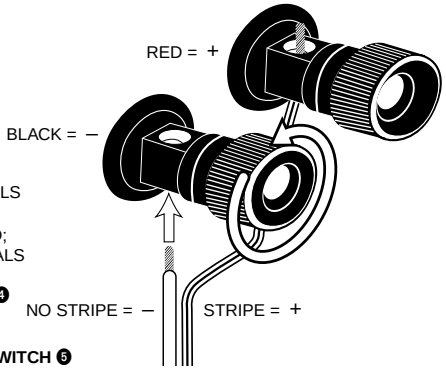




1. LOOSEN TERMINALS
2. INSERT BARE END; TIGHTEN TERMINALS
3. SET **BASS MODE** ❹ TO POSITION 1
4. SET **HIGH-PASS SWITCH** ❺ TO OFF

Method 3b

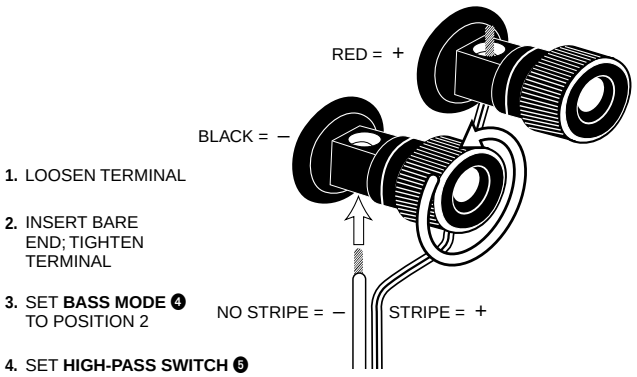




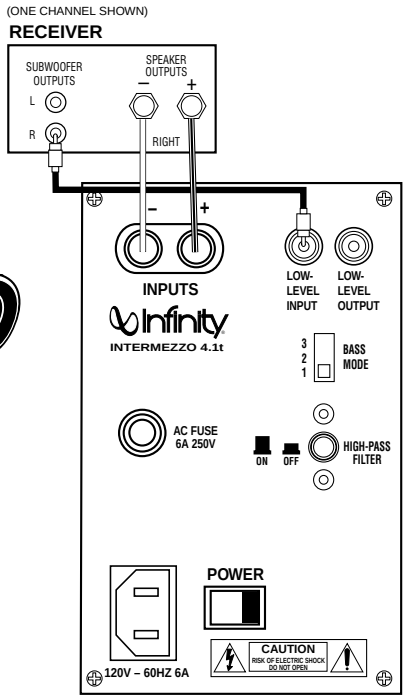
1. LOOSEN TERMINALS
2. INSERT BARE END; TIGHTEN TERMINALS
3. SET **BASS MODE** ❹ TO POSITION 1
4. SET **HIGH-PASS SWITCH** ❺ TO OFF

Controls and Connections (cont.)

Method 4



1. LOOSEN TERMINAL
2. INSERT BARE END; TIGHTEN TERMINAL
3. SET **BASS MODE** ❹ TO POSITION 2
4. SET **HIGH-PASS SWITCH** ❺ TO ON



Final Positioning

After correctly connecting the Intermezzo 4.1t and verifying that both the subwoofer and main section portions are playing, it is time to optimize the system for your particular listening room.

Earlier, you placed the loudspeakers in their general location. Finding the exact location for optimum performance sometimes only involves moving the speakers up to a few inches in any direction. We urge you, therefore, to experiment with placement until your speakers deliver their full potential. When the speakers are moved inward (toward each other) there is generally better focus of instruments and vocalists; however, moving the speakers too close together can reduce the spaciousness of the stage effect and you may need to experiment with the trade-off between focus and imaging. If your listening room is larger than average and your listening position is relatively far from the speakers, wider placement of the speakers may be required.

Operation

The operation of the Intermezzo 4.1t loudspeaker system, and the proper settings for the Room Adaptive Bass Optimization System,™ or R.A.B.O.S.™, is thoroughly covered in the Owner's Guide, part# 336205-001.

For service purposes, the R.A.B.O.S. system is canceled when all three front panel controls (F) (L) (W) are turned fully CW.

Position of the Bass Mode switch, for simple testing purposes:

Using the high-level (Speaker) inputs, switch should be in position 3.

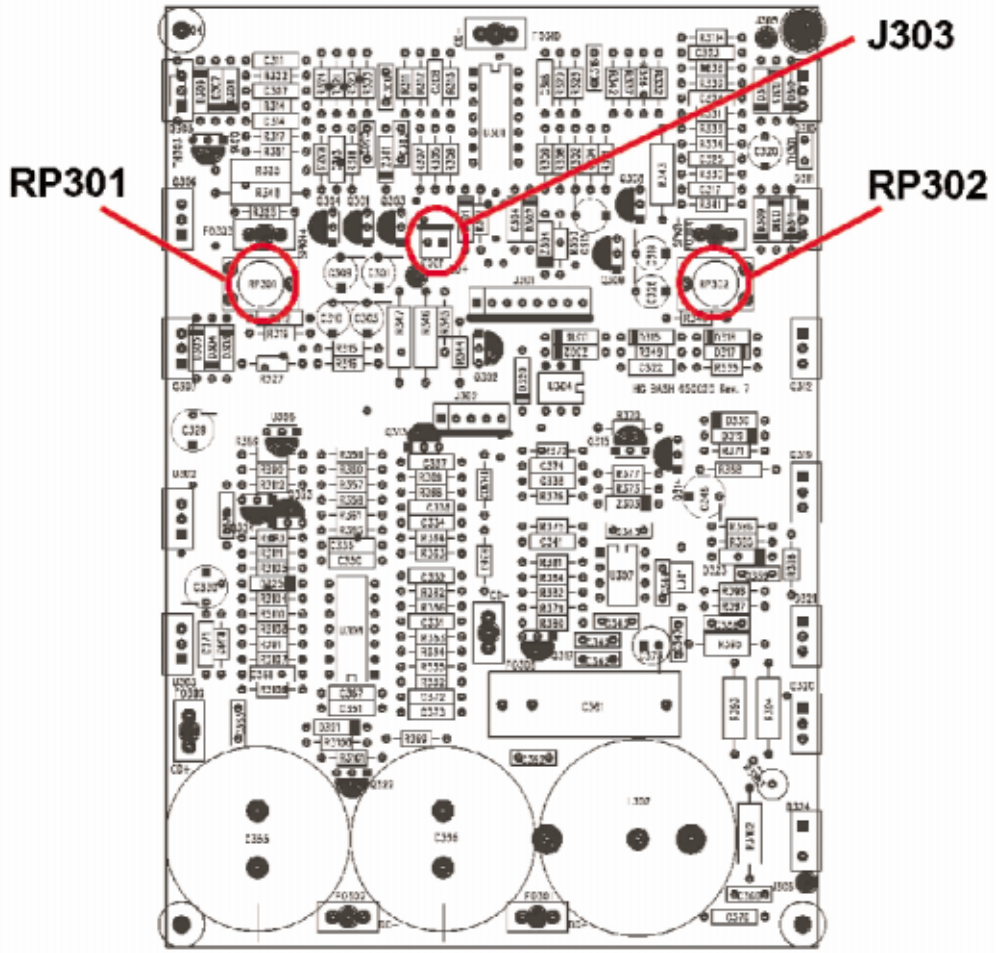
Using the line-level (RCA) inputs, switch should be in position 1.

The only other control of concern is the Main Level Control on the front panel, which operates like a traditional potentiometer.

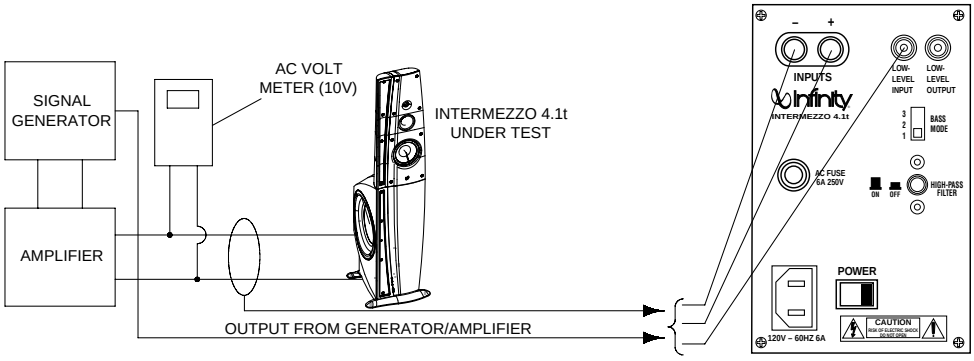
IM 4.1t ADJUST BIAS PROCEDURE

(Mandatory when any output MOSFET transistors Q305, 310, 320, 321, 306, 307, 311, 312 are replaced)

1. Amplifier should be unplugged and OFF.
2. Remove Amp assembly from cabinet; remove rear plastic guard, and detach entire assembly from black plastic cup containing the controls. All wires exiting the assembly can remain connected unless they will prevent you from removing the amplifier or accessing potentiometers on the Linear board PCB in the following steps.
3. Identify the Linear board assembly (PCB with the output transistors).
4. Adjust RP301 and RP302 fully counterclockwise. See diagram below.
5. Apply 120 VAC power to unit; turn power switch ON.
6. Verify that LED lights on the front Gain Control dial, unless you have disconnected the plug.
7. Connect voltmeter set to DC millivolt range to twin pins on terminal J303, on Linear board.
8. Verify initial voltage is less then 0.1mV.
9. Adjust RP301 clockwise until voltmeter reads 0.3mV + the initial current from step #8.
10. Adjust RP302 clockwise until voltmeter now reads 0.6mV + the initial current from step #8.
11. Turn amplifier OFF. Disconnect AC power to unit.
12. Remove voltmeter from terminal J303.
13. Replace assembly to black plastic cup containing the controls (be sure to reattach green ground wire to one screw); replace rear plastic guard, any wires if disconnected, and replace amplifier back into cabinet.



Test Setup and Procedure



SYSTEM AURAL SWEEP TEST

Equipment needed:

- Function/signal generator/sweep generator
- Integrated amplifier
- Multimeter
- Speaker cables & single RCA phono cable

General Unit Function (UUT = Unit Under Test)

For service purposes, cancel the R.A.B.O.S. system by turning all three front panel controls (F) (L) (W) fully clockwise with a small screwdriver. You may want to take note and count the “detents” to be able to set the customer’s system back the way it was before the test.

Position of the Bass Mode switch: initially, switch should be in position 1.

1. From the signal generator, connect one line-level (RCA) cable to the IM 4.1t Line-Level Input jack on the UUT.
2. On the front of the unit, turn the LEVEL control full clockwise (0).
3. Turn on generator; adjust to **200mV, 45Hz**.
4. Plug in UUT; turn the power switch ON. LED should be Red. Turn LEVEL control full counterclockwise (10).
5. LED should now be Green; vigorous bass response should be seen at the woofer (with grille removed).
6. Turn off generator, turn LEVEL control fully clockwise (0), and disconnect RCA cable.
7. Connect one pair of speaker cables to Speaker Level input terminal on UUT. Cables should be connected to an integrated amplifier fed by the signal generator.
8. Bass Mode switch should now be set to position 3.
9. Turn on generator and adjust so that Speaker Level input at the amplifier is **7.0V, 45Hz**. Turn LEVEL control fully counterclockwise (10)
10. Green LED should light, vigorous bass response should be seen at the woofer (with grille removed).

Sweep Function

1. Follow steps 7 – 10 above, using a sweep generator as a signal source.
2. Sweep generator from 20Hz to 20kHz. Listen to the cabinet and drivers for any rattles, clicks, buzzes or any other noises. If any unusual noises are heard, remove woofer and test.

Driver Function (Woofer)

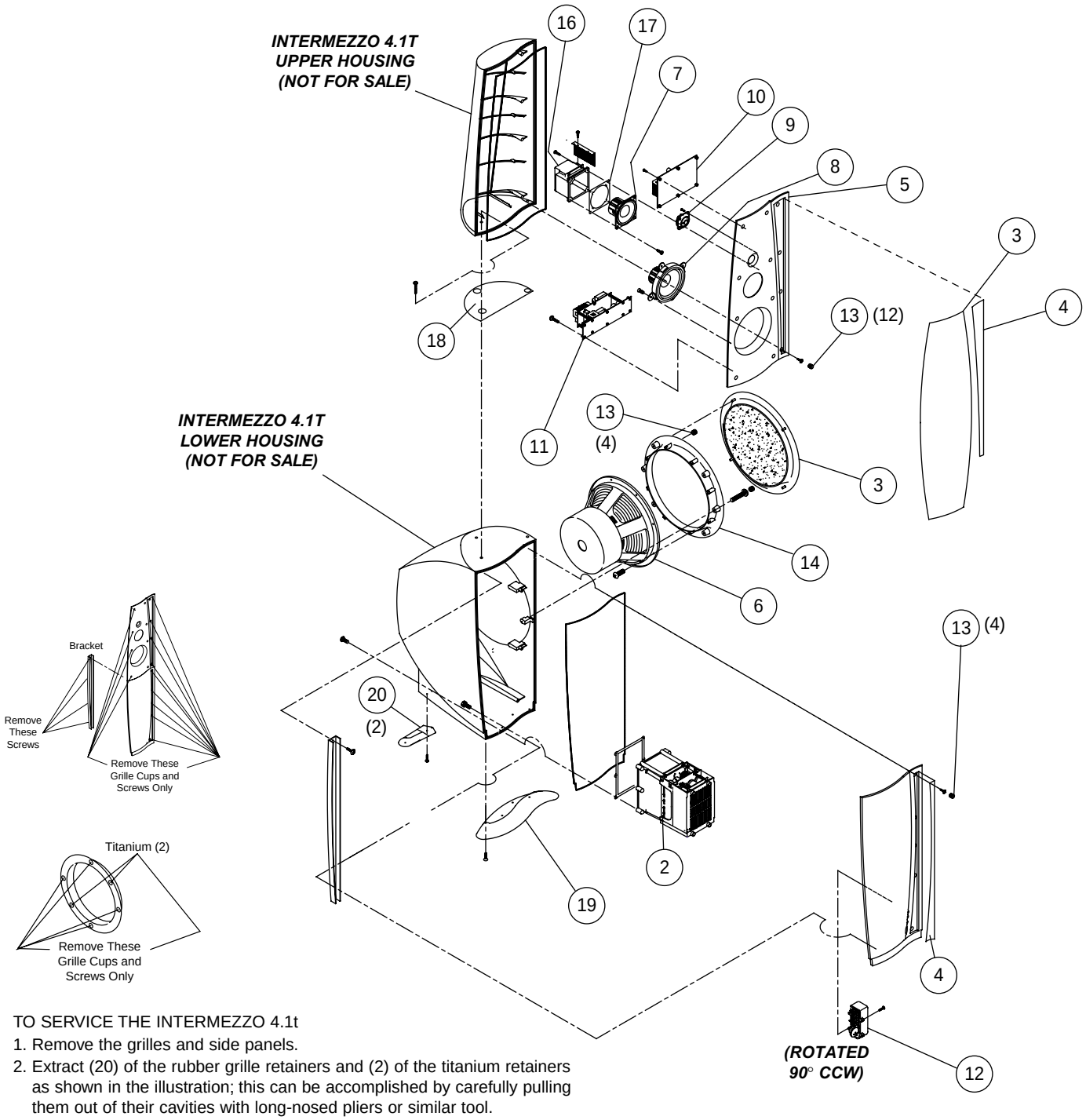
1. Remove woofer from cabinet, following instructions on page 14; detach + and – wire clips.
2. Check DC resistance of woofer; it should be **7.6 ohms** ±10%.
3. Connect a pair of speaker cables to driver terminals. Cables should be connected to an integrated amplifier fed by a signal generator. Turn on generator and adjust so that Speaker Level output is **5.0V**.
4. Sweep generator from 20Hz to 1kHz. Listen to driver for any rubbing, buzzing or other unusual noises.

Mechanical Parts List

1	**Cabinet**	Intermezzo 4.1t L/R (Not for Sale)	
2	**Amplifier Assembly**	Not For Sale	
3	**Grille**	(L) (Set - Upper & Lower) Blue	335734-052
		(R) (Set - Upper & Lower) Blue	335734-051
		(L) (Set - Upper & Lower) Gray	335734-042
		(R) (Set - Upper & Lower) Gray	335734-041
		(L) (Set - Upper & Lower) Eggplant	335734-062
		(R) (Set - Upper & Lower) Eggplant	335734-061
4	**Side Trim Panels**	(L) (Set - Upper & Lower) (Black)	335280-032
		(R) (Set - Upper & Lower) (Black)	335280-031
		(L) (Set - Upper & Lower) (Cherry)	335280-022
		(R) (Set - Upper & Lower) (Cherry)	335280-021
		(L) (Set - Upper & Lower) (Maple)	335280-012
		(R) (Set - Upper & Lower) (Maple)	335280-011
5	**Front Baffle**	(R)	335274-001
		(L)	335274-002
6	**Low-Frequency Transducer**	12" (305mm) C.M.M.D., cast frame, shielded DCR = 7.6 ohms ±10%	335036-001
7	**Midrange Frequency Transducer**	3-1/2" (89mm) cone - C.M.M.D., magnetically shielded, neodymimum, DCR = 4.8 ohms, ±10%	335224-001
8	**Mid-Bass Frequency Transducer**	6-1/2" (165mm) cone - C.M.M.D., magnetically shielded, neodymimum, DCR = 5.6 ohms, ±10%	335418-001
9	**High-Frequency Transducer**	1" (25mm) C.M.M.D. Neodymium, Shielded DCR = 3.4 ohms ±10%	335225-002
10	**Mid/Twt Crossover Network**		335287-002
11	**Mid-Bass Crossover Network**		335287-001
12	**R.A.B.O.S. Control Assembly**	(R)	335457-003
		(L)	335457-004
13	**Grille Retainers (20)**		333249-003
14	**Woofer Trim Ring**	(R)	335450-001
		(L)	335450-002
15	**Trim Ring Grille Cup (2)**		337039-001
16	**Midrange Isolator Cup**		335226-001
17	**Isolator Cup Gasket**		335705-001
18	**Top/Bottom Housing Gasket**		336527-001
19	**Front Foot**	(R)	335451-001
		(L)	335451-002
20	**Rear Foot (2)**		336217-001
21	**Rubber Foot Pad (2)**		335459-001

Exploded View

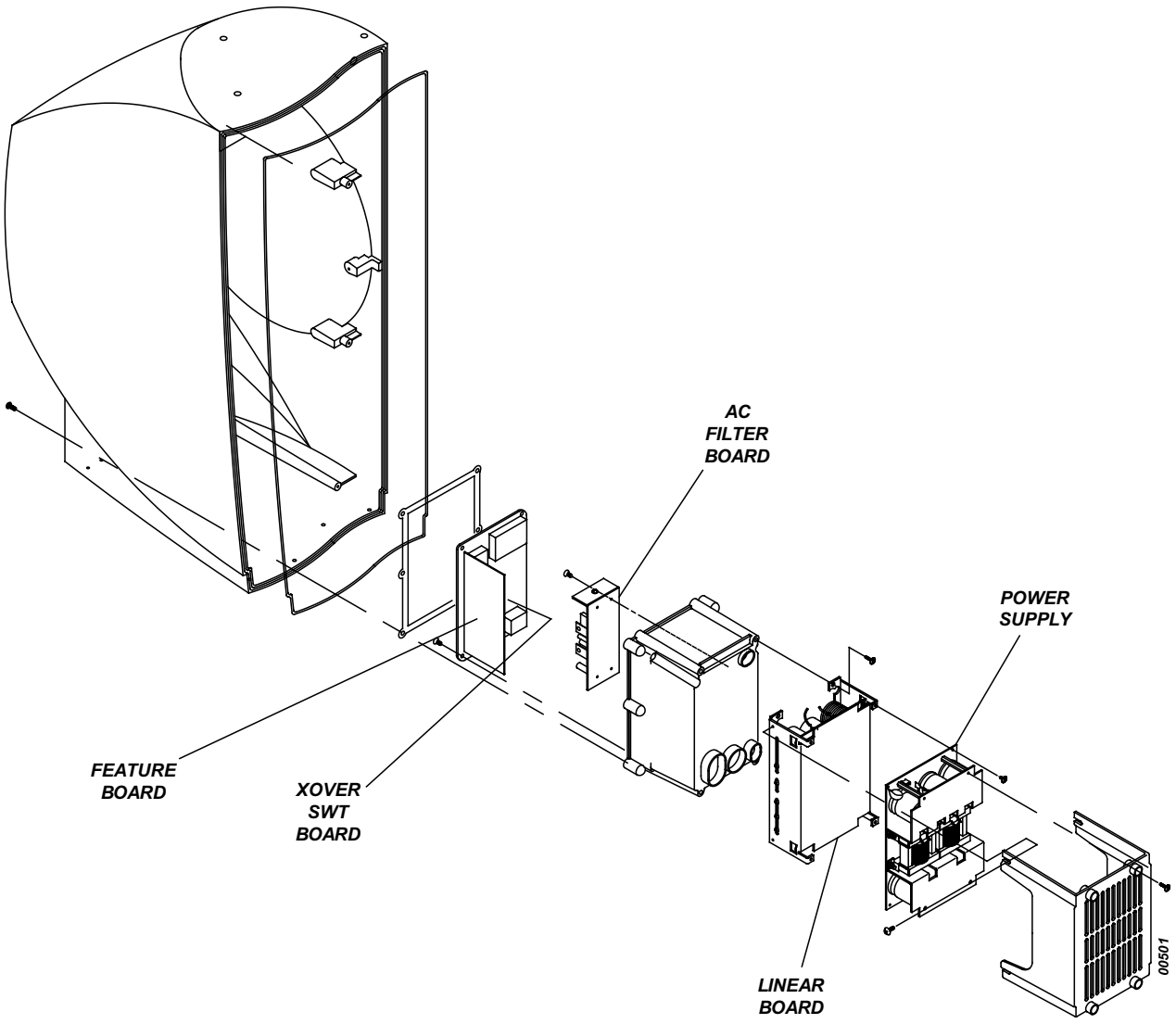
Right Loudspeaker Shown



TO SERVICE THE INTERMEZZO 4.1t

1. Remove the grilles and side panels.
2. Extract (20) of the rubber grille retainers and (2) of the titanium retainers as shown in the illustration; this can be accomplished by carefully pulling them out of their cavities with long-nosed pliers or similar tool.
3. Remove the (13) Phillips screws from both baffles.
4. Tower: Remove the top baffle with the drivers attached.
5. Woofer: Remove the (6) Phillips screws from the trim ring that is now exposed.
6. Remove the trim ring with the woofer attached.
7. Remove the (4) H/L screws by reaching through the woofer cavity; remove the lower baffle with the R.A.B.O.S. controls attached.
8. To service the amplifier, remove the (6) Phillips screws at the rear of the enclosure, and push the amplifier assembly out the front.

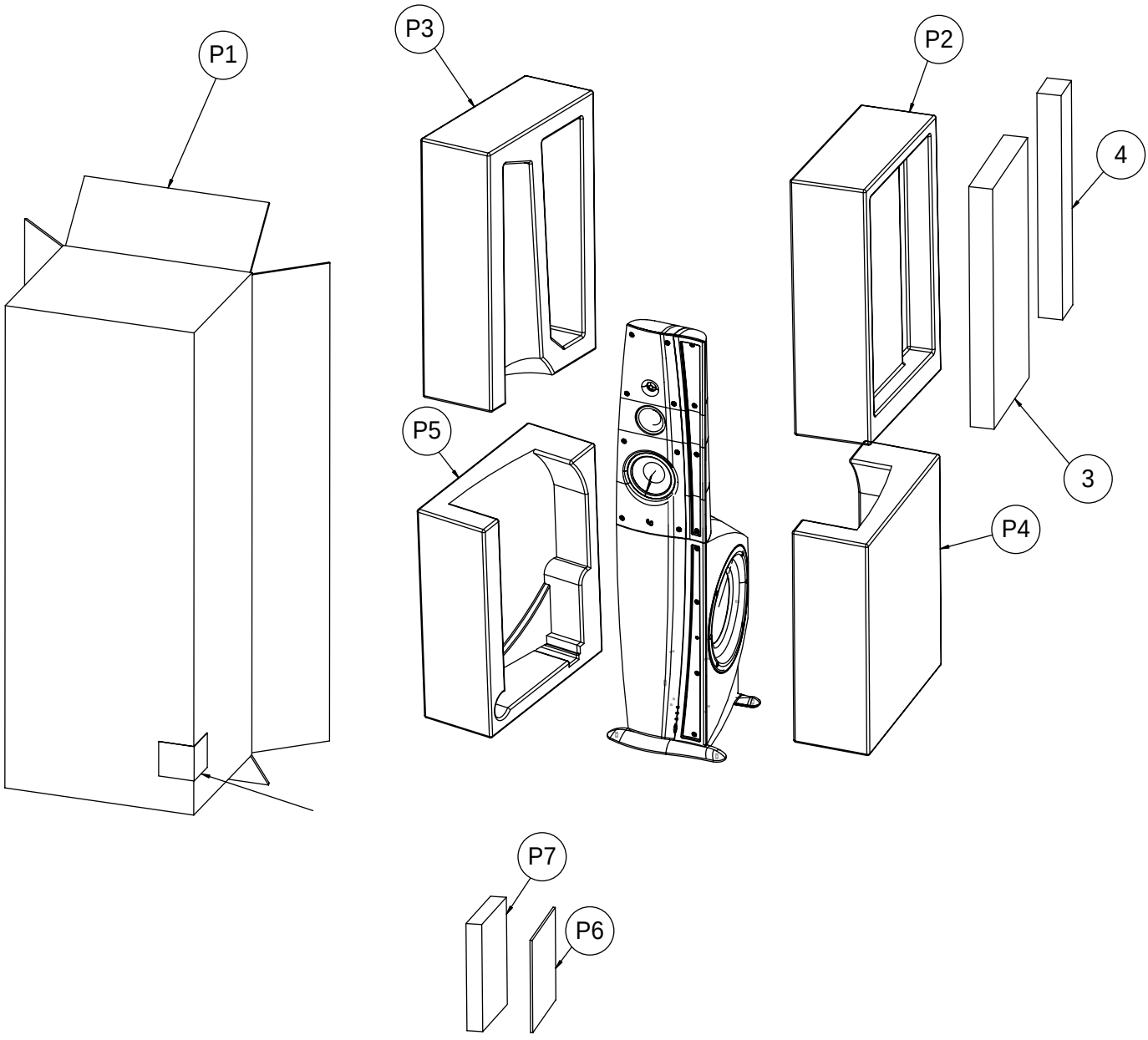
Exploded View of Amplifier



Packaging Parts List

P1	**Outer Carton**		336491-001
P2	**End Pad**	(Right, top right)	336215-001
P2	**End Pad**	(Left, top right)	336216-001
P3	**End Pad**	(Right, top left)	336215-002
P3	**End Pad**	(Left, top left)	336226-002
P4	**End Pad**	(Right, bottom right)	336215-003
P4	**End Pad**	(Left, bottom right)	336216-003
P5	**End Pad**	(Right, bottom left)	336215-004
P5	**End Pad**	(Left, bottom left)	336216-004
P6	**Owner's manual**		336205-001
P6	**Warranty Card**		335841-001
P6	**Survey Card**		335868-002
P7	**R.A.B.O.S. Complete kit**		335852-002
P7	**R.A.B.O.S. Test CD**		335855-001
P7	**R.A.B.O.S. Sound Level Meter**		335368-001
P7	**R.A.B.O.S. Key (Screwdriver)**		091-00121-000
P7	**R.A.B.O.S. Q-Finder**		335856-001
P7	**R.A.B.O.S. Pouch**		335853-001
P8	**9 Volt Battery**		Not For Sale
P9	**Power cord**		336658-115
(Not shown)	**Spike Foot Kit**		331360-003

Packaging



Service Bulletin

Service Bulletin INF2003-03 - June 2003

Warranty labor rate: MAJOR repair

To: All Infinity Service Centers

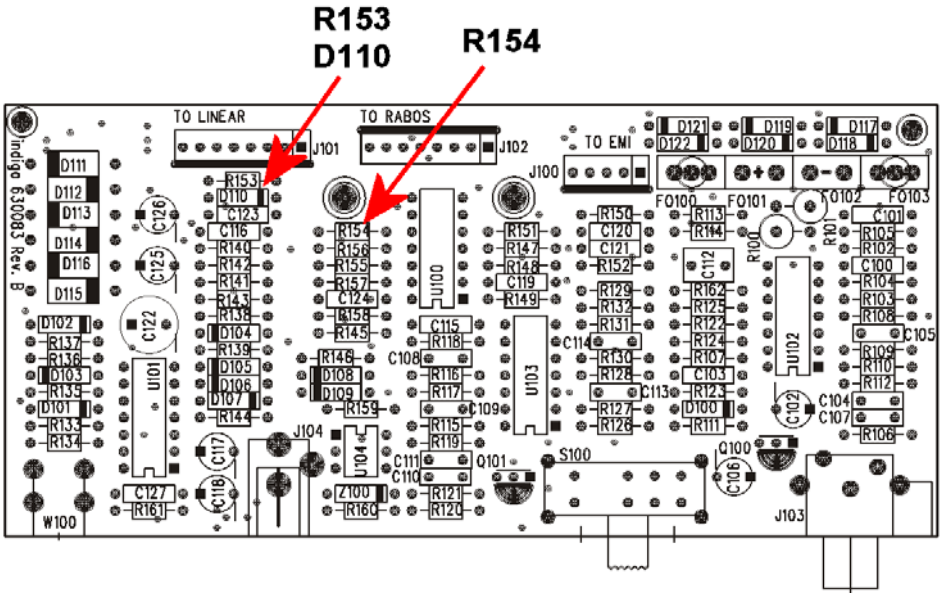
Model: Intermezzo 4.1t

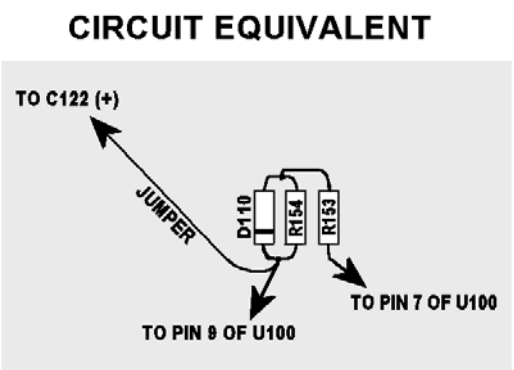
Subject: Distortion at Low Volume Levels

In the event you receive an Intermezzo 4.1t with the complaint "there is distortion at low volume levels, particularly when higher frequencies are present", perform the following procedure:

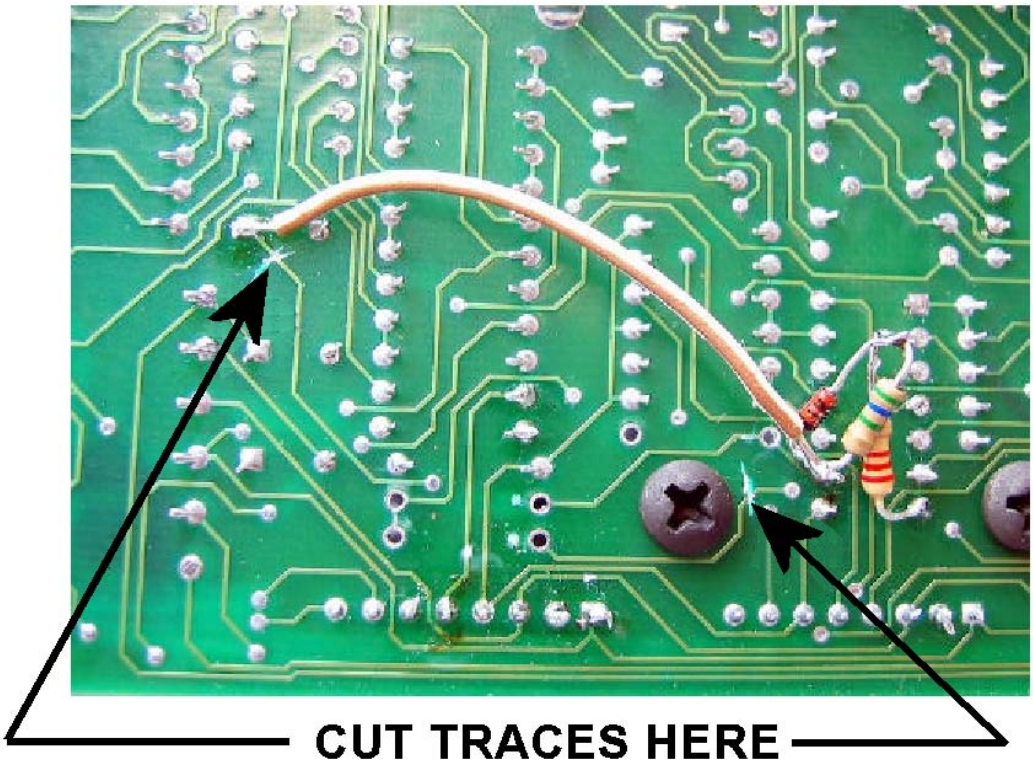
Synopsis:
Remove three components and re-wire them in a similar circuit on the opposite side of the Feature PCB.

1) Remove the woofer grille; extract the (6) rubber grille retainers; this can be accomplished by carefully pulling them out of their cavities with long-nosed pliers or similar tool.
2) Remove the (6) Phillips screws from the woofer trim ring.
3) Remove the trim ring with the woofer attached; unplug the two wire leads.
4) Remove the (6) Phillips screws at the rear of the enclosure, and push the amplifier assembly into the enclosure.
5) Unplug the three connectors from the amplifier; remove the amplifier from the woofer opening.
6) Remove the 4 screws holding the front faceplate w/ controls and Feature PCB to the plastic enclosure; pull the assembly out as far as the attached wires will allow. If the rectangular gasket bordering the enclosure is damaged during this procedure, order Infinity part# MM0080.
7) Unplug all wire connectors on the PCB except the AC power wires, which can remain attached.
8) Remove the 2 screws holding the HP push button switch assembly to the faceplate; remove the assembly and plastic spacers.
9) Locate and remove resistors R153 (2.2KΩ), R154 (5.6MΩ) and diode D110 (1N4148).
10) Resolder the three components together on the rear of the PCB, following the examples below: "Circuit Equivalent", and supplied image on Page 2. Observe polarity for D110. Solder an insulated 16 - 20 gauge (0.5 to 1.0 mm^2) jumper wire to the cluster of parts to complete the connection. Cut the PCB traces in the indicated areas. Add a dab of silicon sealer or equivalent adhesive to hold the components in place on the PCB.





INTERMEZZO 4.1t COMPLETED MODIFICATION



11) After silicon sealer dries, reassemble feature PCB replacing all connectors and switch assembly. Replace faceplate and all connectors; install amplifier back into the IM4.1t enclosure. Replace woofer.
12) Test the unit.

Model	Serial number (120v)	Status	Action
Intermezzo 4.1t	All Serial numbers affected	Distortion may be present at low volume levels	Remove and re-wire R153, R154, D110 on the opposite side of the Feature PCB

Service Bulletin

Service Bulletin INF2001-04 Rev2 – May 2005 | Warranty labor rate: MINOR repair

To: All Infinity Service Centers

Model: Interlude and Intermezzo IL50, IL60, IL100s, IL120s, IM1.2s, IM4.1t

Subject: No Output

In the event you receive an Interlude or Intermezzo loudspeaker with the complaint: "There is no output, and the LED on the volume control does not light, red or green", check the item listed below:

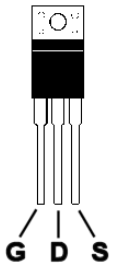
1) Check the line fuse to make sure it's not damaged. Replace if necessary

IL50, IL100s	3A	Infinity part# FS0022
IL60, IL120s	4A	Infinity part# FS0026
IM1.2s, IM4.1t	6A	Infinity part# FS0027

If the fuse is intact, or the unit still does not function, check the power supply portion of the amplifier circuit, described below:

2) Refer to the Exploded view page for detailed instructions on amplifer removal from the enclosure.
3) Remove all connectors and screws necessary to detach the Power Supply PCB from the main chassis heatsink. Squeeze the heads of the plastic standoffs with long-nosed pliers to detach the PCB from the heatsink.
4) Refer to the illustration on page 2. Check the DC resistance of following parts, in circuit, with a DMM:

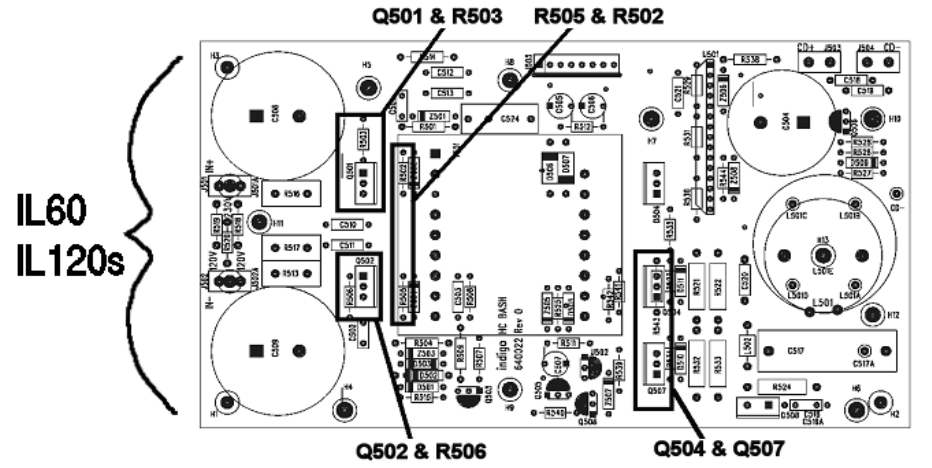
IL120s IL60	IRF740 MOSFETS **Q501, Q502** Infinity part# QM0055	D to S or S to D G to S or S to G D to G or G to D	Should measure >28K ohms* Should measure >400 ohms Should measure >28K ohms*
	22 Ohm 0.6W Resistors **R506, R503** Infinity part# RM0340	Should measure 22 ohms ±1%	
	422 Ohm 1/4 watt Resistors **R505, R502** Infinity part# RM0397	Should measure 422 ohms ±1%	
IL50 IL100s	IRF740 MOSFETS **Q4, Q5** Infinity part# QM0055	D to S or S to D G to S or S to G D to G or G to D	Should measure >28K ohms* Should measure >400 ohms Should measure >28K ohms*
	22 Ohm 0.6W Resistors **R17, R20** Infinity part# RM0340	Should measure 22 ohms ±1%	
	475 Ohm 1/4 watt Resistors **R16, R19** Infinity part# RM0075	Should measure 475 ohms ±1%	
IM1.2s IM4.1t	IRF740 MOSFETS **Q403,404,406,407** Infinity part# QM0055	D to S or S to D G to S or S to G D to G or G to D	Should measure >28K ohms* Should measure >400 ohms Should measure >28K ohms*
	22 Ohm 0.6W Resistors **R407,410,414,417** Infinity part# RM0340	Should measure 22 ohms ±1%	
	365 Ohm 1/4 watt Resistor **R408,411,415,418** Infinity part# RM0072	Should measure 365 ohms ±1%	

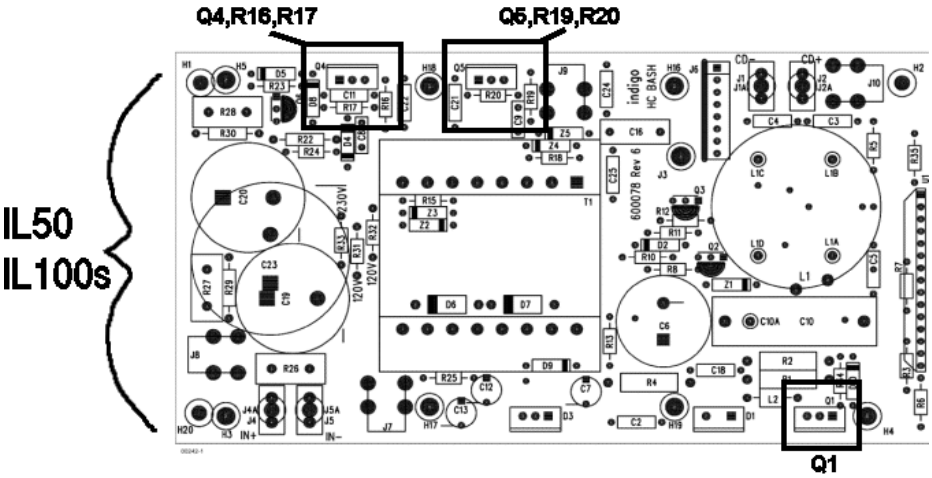


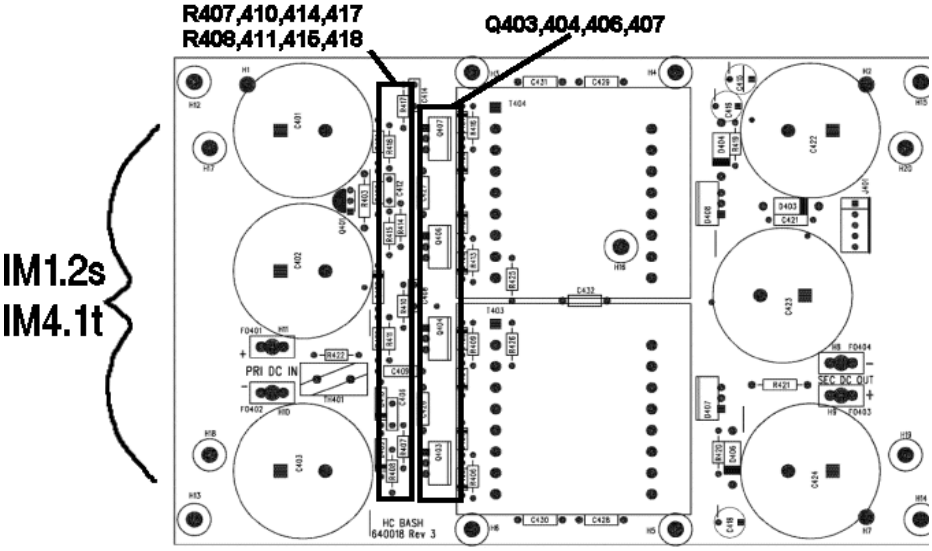
* The two transistor leads should be shorted together before these measurements are taken; the DMM leads will "charge" the circuit and the value may change, but should match the values above. Very low values that do not change indicate a shorted MOSFET.

5) Replace any defective parts above that show measured values lower than normal.
6) Reconnect J505 or J6 multicolor ribbon cable connector; remount the Power supply PCB; reconnect J501/502 or J4/J5 black/red Faston connectors.
7) All models except IM1.2S, IM4.1t: **temporarily DO NOT connect the pair of black/red "CD±" leads on the linear PCB).** Isolate the ends so they are not touching each other, or any conductive material. (For models IM1.2S, IM4.1t procedure is finished; replace amplifier).

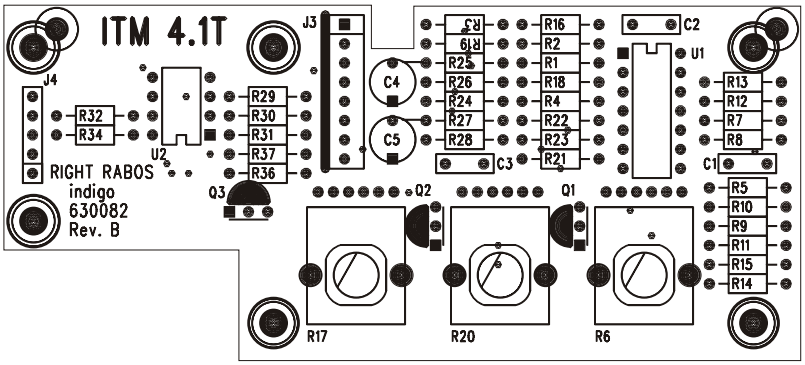
8) Connect the subwoofer amplifier to an AC power source; turn the unit ON. Measure the DC voltage at the **"CD±"** wires; it should be 10-20 volts.
9) If it is 25 volts or greater, turn the amplifier OFF, disconnect from the power source, and replace:
   IL120S, IL60: **Q504,Q507** IRF640 on the Power Supply PCB, Infinity part# QM0015.
   IL50, IL100s: **Q1** IRF540 on the Power Supply PCB, Infinity part# QM0020.
10) If the voltage is normal, turn the amplifier OFF, disconnect from the power source, and reconnect the "CD±" leads.
11) Finish reassembling the amplifier, remount the heatsink, replace the amplifier in the cabinet and test the subwoofer.



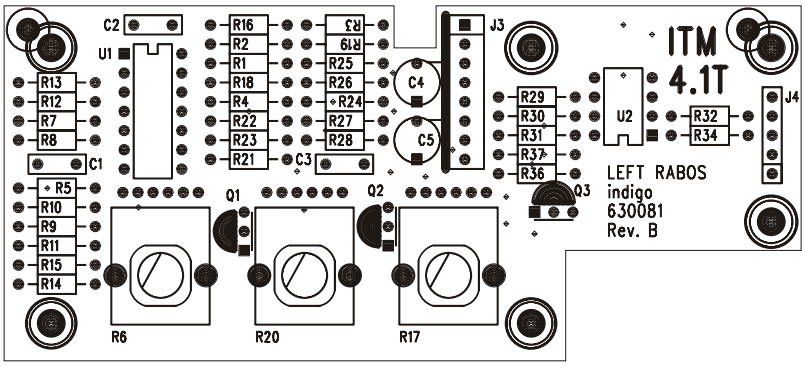




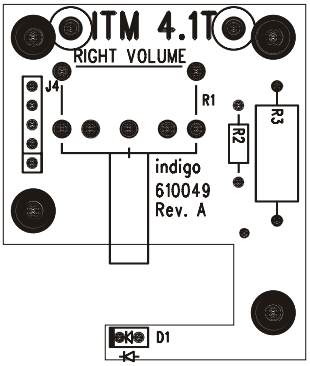
Right R.A.B.O.S.



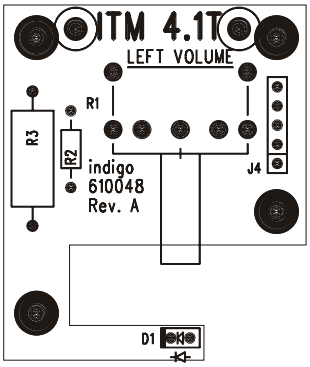
Left R.A.B.O.S.



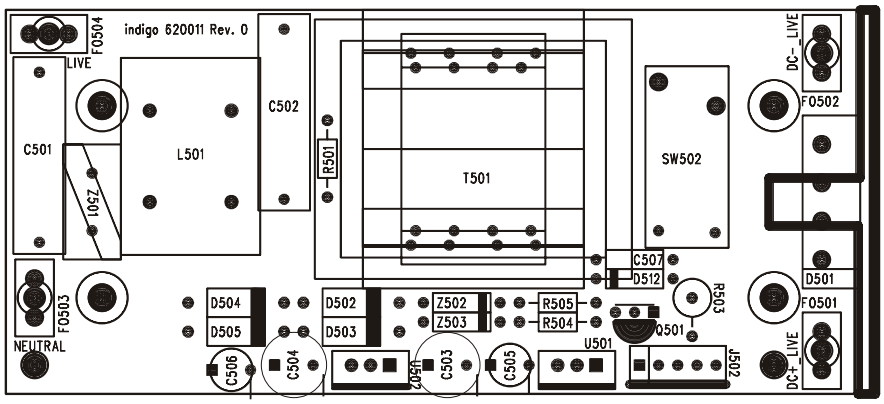
Right Volume



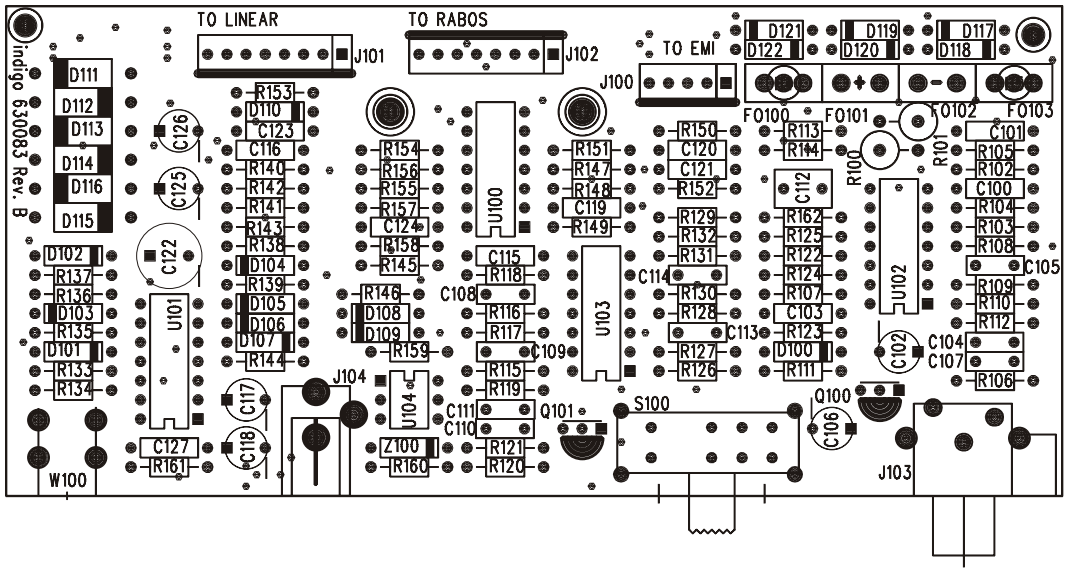
Left Volume



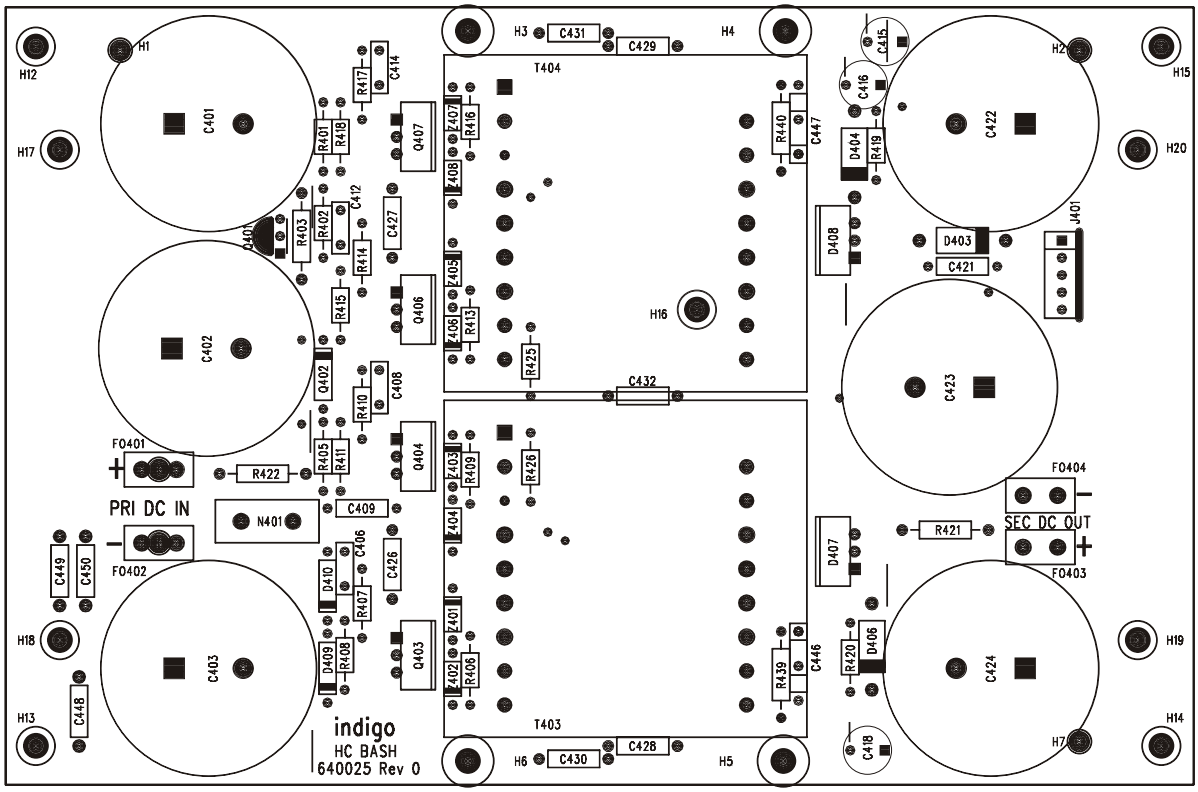
AC Filter



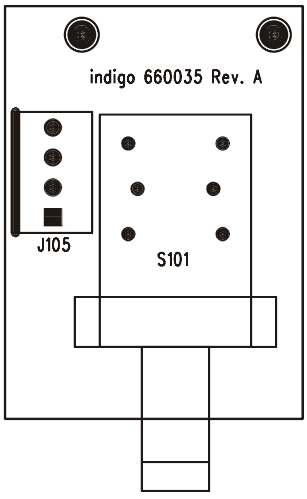
Feature Board



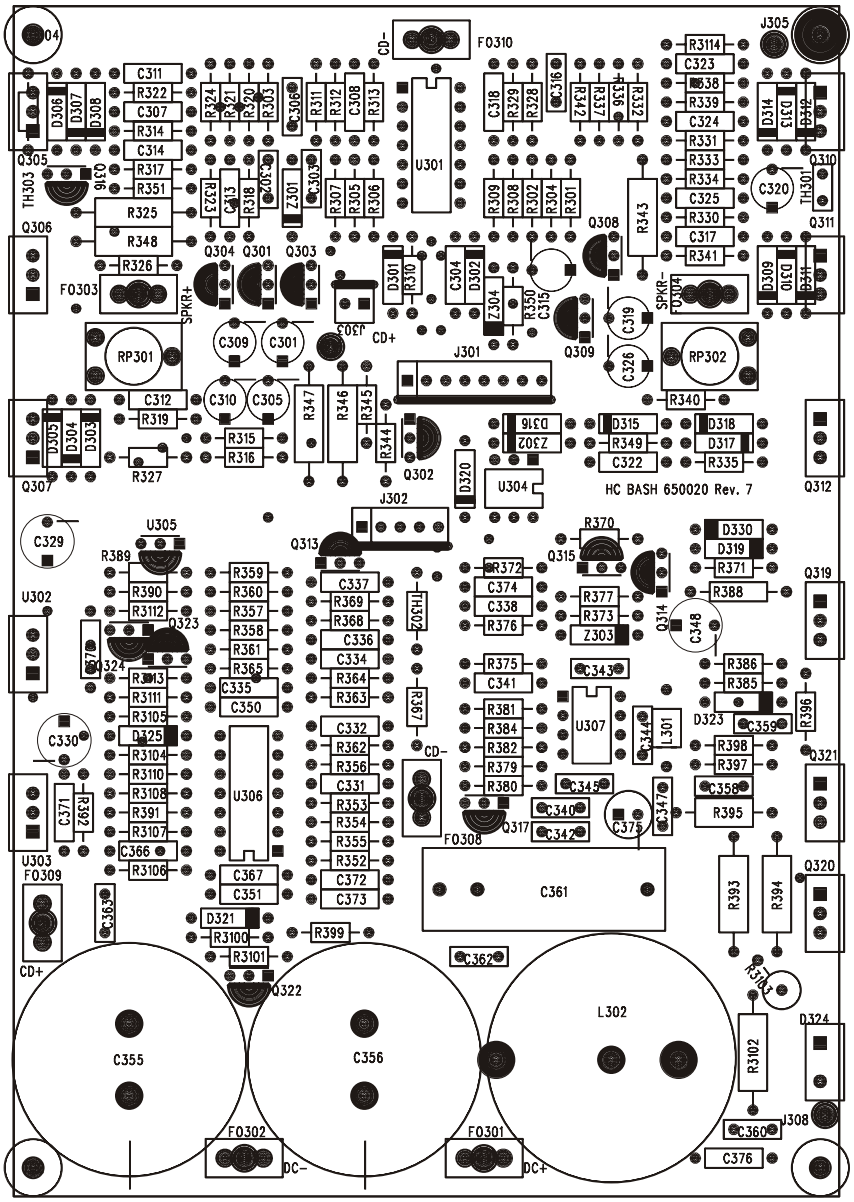
1KW Power Supply



XOVER SWT BD



Linear Class-D Board



Electrical Parts List

Part#	Reference Designator	Qty.	Description
Feature PCB			
Semiconductors			
UA0003	U100, U101	2	OPAMP, QUAD 14PIN DIL LM324N
UA0009	U102, U103	2	OPAMP, QUAD 14P DIL TL074/084
UF0012	U104	1	FOTO, 6PIN 4N35
DR0038	D111, D112, D113, D114, D115, D116	6	RECT, 1A 400V GENERAL 1N4002
DS0001	D100, D101, D102, D103, D104, D105, D106, D107, D108, D109, D110, D117, D118, D119, D120, D121, D122	17	RECT, 100mA 75V SIGNAL 1N4148T
DZ0013	Z100	1	ZENER, 500MW 5.6V 5% 1N5232B
QM0035-S	Q100, Q101	2	JFET, J111 SELECTED TR ONLY
Resistors			
RC0003	R159	1	RES, CF 1K0 1/4W 5%
RC0004	R144, R145	2	RES, CF 1M0 1/4W 5%
RC0006	R135, R136, R137, R138, R139, R140, R143, R152, R155, R157, R158, R160	12	RES, CF 10K 1/4W 5%
RC0009	R161	1	RES, CF 10ohms1/4W 5%
RC0037	R142, R146	2	RES, CF 2K0 1/4W 5%
RC0039	R147, R148, R153, R156	4	RES, CF 2K2 1/4W 5%
RC0083	R111, R113, R141	3	RES, CF 100K 1/4W 5%
RC0115	R150	1	RES, CF 47K 1/4W 5%
RC0135	R151	1	RES, CF 150K 1/4W 5%
RC0192	R100	1	RES, CF 2K0 1/2W 5%
RC0273	R117, R121, R132	3	RES, ZERO OHM 1/4W
RC0277	R154	1	RES, CF 5M6 1/4W 5%
RC0281	R149	1	RES, CF 510K 1/4W 5%
RM0001	R112	1	RES, MF 1K00 1/4W 1%
RM0002	R106, R123, R124, R162	4	RES, MF 10K0 1/4W 1%
RM0011	R102, R103, R128	3	RES, MF 100K 1/4W 1%
RM0019	R127	1	RES, MF 1K30 1/4W 1%
RM0075	R133	1	RES, MF 475 ohms1/4W 1%
RM0078	R110	1	RES, MF 680 ohms1/4W 1%
RM0106	R107	1	RES, MF 14K0 1/4W 1%
RM0113	R122, R125	2	RES, MF 20K0 1/4W 1%
RM0115	R126	1	RES, MF 23K7 1/4W 1%
RM0142	R108	1	RES, MF 287K 1/4W 1%
RM0180	R104, R105	2	RES, MF 4K99 1/4W 1%
RM0193	R114, R115, R118, R119	4	RES, MF 42K2 1/4W 1%
RM0195	R130	1	RES, MF 187K 1/4W 1%
RM0269	R129	1	RES, MF 93K1 1/4W 1%
RM0290	R109	1	RES, MF 143K 1/4W 1%
RM0404	R101	1	RES, MF 54R9 1/4W 1%
Capacitors			
CC0025	C121, C123	2	CAP, CA 1000PF 100V 10%
CC0072	C100, C101, C103, C119, C124	5	CAP, CA 100PF 100V NPO 10%
CC0082	C116, C120	2	CAP, CA .1UF 50V 20%
CC0087	C127	1	CAP, CA .01UF 100V 20%
CE0003	C117, C118	2	CAP, E 2.2UF 50V 20% 105C
CE0098	C106, C125, C126	3	CAP, E 22UF 50V 20% 5X11 5MMLS
CE0103	C122	1	CAP, E 100UF 35V 85DEG 5MMLS

Electrical Parts List (cont.)

Part#	Reference Designator	Qty.	Description
CE0116	C102	1	CAP, E 2.2UF 50V BP 6X11 5MMLS
CF0045	C113, C114	2	CAP, F .1UF 63DC 5% 5MMLS
CF0088	C104, C105	2	CAP, F .01UF 100V 5% 5MMLS
CF0092	C107	1	CAP, F 1000PF 100V 5% 5MMLS
CF0118	C112	1	CAP, F .33UF 63V 10% 5MMLS
CF0125	C108, C110	2	CAP, F .068UF 100V 5% 5MMLS
CF0128	C109, C111	2	CAP, F .033UF 100V 5% 5MMLS
Miscellaneous			
JC0049	J103	1	CNCTR, DUAL JACK RCA
JC0064	J104	1	CNCTR, DC POWER JACK 2MM DIA
JH0008	J100	1	CNCTR, HEADER 5PIN .100CTR
JH0074	J101, J102	2	CNCTR, HEADER 8PIN LOCKING .1C
MM0025	W100	1	MISC, PC MT SCREW TERM 6-32
MT0003	FO101	1	TERM, FASTON MALE PCMT 250X032
MT0023	FO100, FO102	2	TERM, FASTON MALE PCMT 187X032
MT0031	FO103	1	TERM, FASTON MALE PCMT 205X020
SR0040	S100	1	SWITCH, SLIDER DP3T PCB MOUNT
Linear PCB			
Semiconductors			
QB0033	Q319	1	TRANS, NPN 250V 1A TO220 TIP47
QM0015	Q305, Q310, Q320, Q321	4	MOSFET, IRF640 TO220AB
QM0032	Q306, Q307, Q311, Q312	4	MOSFET, IRF9640 T0220AB
QM0035-S	Q301	1	JFET, J111 SELECTED TR ONLY
UV0007	U303	1	VREG, LINEAR TO220 LM7905CT
UV0013	U302	1	VREG, +5V 100MA TO220 LM7805CT
DR0088	D324	1	RECT, IR HEXFRED HFA08TB60
UA0003	U306	1	OPAMP, QUAD 14PIN DIL LM324N
UA0009	U301	1	OPAMP, QUAD 14P DIL TL074/084
UF0013	U304	1	FOTO, 6PIN MOC3012
UP0004	U307	1	PWM, 8PIN DIL UC3842N
DS0001	D301, D302, D303, D304, D305, D306, D307, D308, D309, D310, D311, D312, D313, D314, D315, D316, D317, D318, D319, D320, D321, D323, D325, D330	24	RECT, 100mA 75V SIGNAL 1N4148T
DZ0002	Z303	1	ZENER, 500mW 12V 5% 1N5242B
DZ0021	Z301, Z302	2	ZENER, 500MW 15V 5% 1N5245B
DZ0034	Z304	1	ZENER, 500MW 10V 5% 1N5240B
QB0002	Q314, Q315, Q317	3	TRANS, NPN 40V .6A TO92 2N4401
QB0017	Q303, Q308, Q322, Q323	4	TRANS, NPN 150V 0.6A 2N5551TR
QB0018	Q302, Q304, Q309, Q313, Q316, Q324	6	TRANS, PNP 150V 0.6A 2N5401TR
DZ0018	U305	1	ZENER, 2.5-37V SHUNT TL431CLP
Resistors			
RC0004	R399	1	RES, CF 1M0 1/4W 5%
RC0005	R388	1	RES, CF 10K 1/2W 5%
RC0006	R310, R349	2	RES, CF 10K 1/4W 5%
RC0061	R350	1	RES, CF 4K7 1/4W 5%
RC0083	R303	1	RES, CF 100K 1/4W 5%
RC0087	R323, R326, R327, R339, R340, R341	6	RES, CF 330 ohms1/4W 5%
RC0116	R3107	1	RES, CF 330K 1/4W 5%

Electrical Parts List (cont.)

Part#	Reference Designator	Qty.	Description
RC0127	R3106	1	RES, CF 30K 1/4W 5%
RC0128	R376	1	RES, CF 33K 1/4W 5%
RC0135	R363	1	RES, CF 150K 1/4W 5%
RC0229	R3103	1	RES, CF 200K 1/2W 5% 1/4W BODY
RC0273	R313, R395, R3114	3	RES, ZERO OHM 1/4W
RM0001	R344, R370, R371, R372, R3101	5	RES, MF 1K00 1/4W 1%
RM0002	R377, R380	2	RES, MF 10K0 1/4W 1%
RM0003	R312, R329	2	RES, MF 15K0 1/4W 1%
RM0011	R352, R353, R354, R364, R3104, R3105	6	RES, MF 100K 1/4W 1%
RM0024	R315, R317, R331, R333	4	RES, MF 2K21 1/4W 1%
RM0031	R320, R321, R336, R337, R369	5	RES, MF 3K32 1/4W 1%
RM0035	R3108	1	RES, MF 4K75 1/4W 1%
RM0037	R367	1	RES, MF 51K1 1/4W 1%
RM0039	R304	1	RES, MF 5K11 1/4W 1%
RM0043	R319, R322, R335, R338, R384	5	RES, MF 6K81 1/4W 1%
RM0065	R373	1	RES, MF 200 ohms1/4W 1%
RM0069	R390, R391	2	RES, MF 274 ohms1/4W 1%
RM0071	R389, R392	2	RES, MF 332 ohms1/4W 1%
RM0073	R324, R342	2	RES, MF 392 ohms1/4W 1%
RM0079	R3112, R3113	2	RES, MF 750 ohms1/4W 1%
RM0082	R368	1	RES, MF 1K21 1/4W 1%
RM0083	R345	1	RES, MF 1K50 1/4W 1%
RM0084	R3100	1	RES, MF 1K65 1/4W 1%
RM0089	R382	1	RES, MF 2K43 1/4W 1%
RM0093	R316, R318, R332, R334	4	RES, MF 4K53 1/4W 1%
RM0113	R308, R309, R375, R381	4	RES, MF 20K0 1/4W 1%
RM0114	R361	1	RES, MF 22K1 1/4W 1%
RM0118	R351	1	RES, MF 210 ohms1/4W 1%
RM0120	R358, R360, R362	3	RES, MF 30K1 1/4W 1%
RM0139	R314, R330	2	RES, MF 267K 1/4W 1%
RM0148	R302, R307	2	RES, MF 6K34 1/4W 1%
RM0165	R357	1	RES, MF 24K9 1/4W 1%
RM0180	R311, R328, R355, R356, R359, R379	6	RES, MF 4K99 1/4W 1%
RM0276	R365	1	RES, MF 294K 1/4W 1%
RM0304	R305, R306	2	RES, MF 7K87 1/4W 1%
RM0336	R385	1	RES, MF 47 ohms0.6W 1% FLAMEPROOF
RM0339	R396, R397	2	RES, MF 10 ohms0.6W 1% FLAMEPROOF
RM0365	R386	1	RES, MF 100 ohms0.6W 1% FLAMEPRF
RX0074	R325, R343	2	RES, MO 4K7 1W 5%
RX0080	R3102	1	RES, MO 4R7 2W 5%
RX0097	R348	1	RES, MO 3K9 2W 5% PR01 SERIES
RP0056	RP301, RP302	2	POT, 5K 8MM HO ohmsTOP ADJ/COVER
RW0022	R346, R347, R393, R394	4	RES, WW 0R1 2W 5%
Capacitors			
CC0021	C360	1	CAP, C 470PF 1KV 10% .2LS TR
CC0032	C358	1	CAP, C 2200PF 500V 10% .2LS TR
CC0095	C345, C347	2	CAP, C 470P 100V NPO 5% TR
CE0018	C329, C330	2	CAP, E 100UF 25V 20% 5MMLS
CE0098	C301, C309, C310, C319, C320	5	CAP, E 22UF 50V 20% 5X11 5MMLS
CE0103	C348	1	CAP, E 100UF 35V 85DEG 5MMLS

Electrical Parts List (cont.)

Part#	Reference Designator	Qty.	Description
CE0106	C305, C315, C326	3	CAP, E 22UF 35V BP 8X11 5MMLS
CF0008	C342	1	CAP, F 2200PF 100V 5% 5MMLS
CF0035	C306, C316	2	CAP, F .022UF 100V 5% 5MMLS
CF0045	C302, C303	2	CAP, F .1UF 63DC 5% 5MMLS
CC0020	C335, C366	2	CAP, CA 470PF 100V 5%
CC0040	C313, C324, C331	3	CAP, CA 4700PF 100V 10%
CC0059	C304, C311, C312, C322, C323	5	CAP, CA .1UF 100V 20%
CC0065	C337, C367	2	CAP, CA 2200P 100V 10%
CC0072	C341	1	CAP, CA 100PF 100V NPO 10%
CC0082	C350, C351, C370, C371	4	CAP, CA .1UF 50V 20%
CC0087	C332, C338	2	CAP, CA .01UF 100V 20%
CC0108	C307, C317	2	CAP, CA 22PF 50V 10%
CC0017	C340	1	CAP, C 330PF 100V 10% 5MMLS BU
CC0078	C344	1	CAP, C .22UF 50V 10% .2LS BULK
CC0079	C343	1	CAP, C .1UF 50V 20% .2LS TR
CE0121	C355, C356	2	CAP, E 470UF 200V 20% 30X25
CF0146	C361	1	CAP, F 6.8UF 250V 10% 27MMLS
Miscellaneous			
540130	L302	1	IND, CM CHOKE 150UH ELYTONE
BF0007	L301	1	BEAD, FERRITE
JH0008	J302	1	CNCTR, HEADER 5PIN .100CTR
JH0016	J303	1	CNCTR, HEADER 2PIN .100CTR
JH0074	J301	1	CNCTR, HEADER 8PIN LOCKING .1C
KS0017	TH302, TH303	2	THERMISTOR, 100K @ 25C NTC BUL
KS0019	TH301	1	THERMISTOR, PTH9L04BD22TS2F510
MT0003	FO304	1	TERM, FASTON MALE PCMT 250X032
MT0005		2	TERM, KWIKDISC .187 X.032 FEMA USED ON END OF 480022 AND 48028
MT0023	FO301, FO302, FO308, FO311	4	TERM, FASTON MALE PCMT 187X032
MT0036	FO303	1	TERM, FASTON MALE PCMT 205X032
Power Supply PCB			
Semiconductors			
DZ0021	Z401, Z402, Z403, Z404, Z405, Z406, Z407, Z408	8	ZENER, 500MW 15V 5% 1N5245B
QB0018	Q401	1	TRANS, PNP 150V 0.6A 2N5401TR
DS0002	D409, D410	2	RECT, 100MA 200V SIGNAL 1N3070
DR0084	D407, D408	2	RECT, 8A 600V ULTRAF MUR1660CT
DR0086	D403, D404, D406	3	RECT, 1A 600V ULTRAFAST MUR160
DD0003	Q402	1	RECT, 1A2 60V DIAC
QM0055	Q403, Q404, Q406, Q407	4	MOSFET, IRF740 TO220AB IR ONLY
Resistors			
RX0050	R439, R440	2	RES, MO 10 ohms1W6 5%
RC0138	R422	1	RES, CF 200K 1/4W 5%
RM0001	R401	1	RES, MF 1K00 1/4W 1%
RM0012	R405	1	RES, MF 100 ohms1/4W 1%
RM0075	R406, R408, R409, R411, R413, R415, R416, R418,	8	RES, MF 475 ohms1/4W 1%
RM0198	R402	1	RES, MF 205K 1/4W 1%
RM0340	R407, R410, R414, R417, R419, R420, R425, R426	8	RES, MF 22 ohms0.6W 1% FLAMEPROOF
RX0046	R403, R421	2	RES, MO 47K 1W 5%

Electrical Parts List (cont.)

Part#	Reference Designator	Qty.	Description
Capacitors			
CC0124	C446, C447	2	CAP, C .01UF 500V DISC .2LS TR
CE0013	C415, C416, C418	3	CAP, E 47UF 50V 20% 5MMLS
CF0093	C406, C408, C412, C414	4	CAP, F 4700PF 100V 5% 5MMLS
CC0087	C409, C421	2	CAP, CA .01UF 100V 20%
CC0130	C432, C448	2	CAP, CY1 4700PF 250V 20% .4LS
CE0040	C401, C402, C403, C422, C423, C424	6	CAP, E 680UF 200V 25X35 85DEG
CF0050	C426, C427, C449, C450	4	CAP, F .1UF 250V 10% 10MMLS
CF0127	C430, C431	2	CAP, F .22UF 250V 10% 5MMLS
Miscellaneous			
500109		2	XFMR, POWER 500W ETD44 CLASS F T403, T404 CUT AWAY PIN #18 FOR BOTH LOCATIONS
JH0008	J401	1	CNCTR, HEADER 5PIN .100CTR
KS0021	TH401	1	SURGISTOR, 4R 8A 70J SL154R008
MT0023	FO401, FO402, FO403, FO404	4	TERM, FASTON MALE PCMT 187X032
AC Filter PCB			
DR0038	D502, D503, D504, D505	4	RECT, 1A 400V GENERAL 1N4002
DS0001	D512	1	RECT, 100mA 75V SIGNAL 1N4148T
DZ0012	Z502, Z503	2	ZENER, 500MW 3.9V 5% 1N5228B
DB0006	D501	1	RECT, 8A 400V BRIDGE
QB0002	Q501	1	TRANS, NPN 40V .6A TO92 2N4401
UV0007	U502	1	VREG, LINEAR TO220 LM7905CT
UV0013	U501	1	VREG, +5V 100MA TO220 LM7805CT
RC0004	R501	1	RES, CF 1M0 1/4W 5%
CE0003	C505, C506	2	CAP, E 2.2UF 50V 20% 105C
CE0103	C503, C504	2	CAP, E 100UF 35V 85DEG 5MMLS
CC0059	C507	1	CAP, CA .1UF 100V 20%
CF0057	C501, C502	2	CAP, FX .22UF 250V 10%
JH0008	J502	1	CNCTR, HEADER 5PIN .100CTR
KV0001	Z501	1	VARISTOR, 275V 100J .6W
MT0023	FO503, FO504	2	TERM, FASTON MALE PCMT 187X032
RX0083	R503	1	RES, MO 150R 3W 5%
SR0038	SW502	1	SWITCH, SPST TV5 5A 12V
500103	T501	1	XFMR, POWER 60HZ 24V FT3245
540124	L501	1	IND, CM CHOKE YT7271
HPF Switch Board			
JH0093	J105	1	CNCTR, HEADER 4PIN .156CTR LCK
SR0044	S101	1	SWITCH, PUSH DPDT 125VAC 7A
Rabos PCB (Left)			
Semiconductors			
UA0009	U1	1	OPAMP, QUAD 14P DIL TL074/084
UA0010	U2	1	OPAMP, DUAL 8PIN DIL TL082
QM0035-S	Q1, Q2	2	JFET, J111 SELECTED TR ONLY
QB0017	Q3	1	TRANS, NPN 150V 0.6A 2N5551TR
Resistors			
RP0087	R17, R20	2	POT, A10K DUAL 12MM HO ohms5%

Electrical Parts List (cont.)

Part#	Reference Designator	Qty.	Description
RP0088	R6	1	POT, C10K DUAL -10% MID 1.5K
RC0148	R30	1	RES, CF 10M 1/4W 5%
RM0001	R27, R29	2	RES, MF 1K00 1/4W 1%
RM0002	R1, R2, R4, R10, R15, R16, R24, R26, R32, R37	10	RES, MF 10K0 1/4W 1%
RM0003	R9, R14	2	RES, MF 15K0 1/4W 1%
RM0012	R3	1	RES, MF 100 ohms1/4W 1%
RM0024	R25	1	RES, MF 2K21 1/4W 1%
RM0031	R36	1	RES, MF 3K32 1/4W 1%
RM0042	R31	1	RES, MF 681 ohms1/4W 1%
RM0080	R5, R11	2	RES, MF 825 ohms1/4W 1%
RM0178	R34	1	RES, MF 10K2 1/4W 1%
RM0260	R28	1	RES, MF 1M0 1/4W 1%
RM0271	R22	1	RES, MF 110K 1/4W 1%
RM0281	R8, R13	2	RES, MF 6K04 1/4W 1%
RM0315	R19	1	RES, MF 2K67 1/4W 1%
RM0369	R7, R12	2	RES, MF 340 ohms1/4W 1%
RM0370	R21	1	RES, MF 9K31 1/4W 1%
RM0377	R18	1	RES, MF 3K57 1/4W 1%
RM0378	R23	1	RES, MF 549 ohms1/4W 1%
Capacitors			
CE0115	C4, C5	2	CAP, E 1UF 63V 6X11 85C 5MMLS
CF0045	C1, C2, C3	3	CAP, F .1UF 63DC 5% 5MMLS
Miscellaneous			
JH0061	J4	1	CNCTR, HEADER 5PIN
JH0074	J3	1	CNCTR, HEADER 8PIN LOCKING .1C
Rabos PCB (Right)			
UA0009	U1	1	OPAMP, QUAD 14P DIL TL074/084
UA0010	U2	1	OPAMP, DUAL 8PIN DIL TL082
QM0035-S	Q1, Q2	2	JFET, J111 SELECTED TR ONLY
Resistors			
RP0087	R17, R20	2	POT, A10K DUAL 12MM HO ohms5%
RP0088	R6	1	POT, C10K DUAL -10% MID 1.5K
RC0148	R30	1	RES, CF 10M 1/4W 5%
RM0001	R27, R29	2	RES, MF 1K00 1/4W 1%
RM0002	R1, R2, R4, R10, R15, R16, R24, R26, R32, R37	10	RES, MF 10K0 1/4W 1%
RM0003	R9, R14	2	RES, MF 15K0 1/4W 1%
RM0012	R3	1	RES, MF 100 ohms1/4W 1%
RM0024	R25	1	RES, MF 2K21 1/4W 1%
RM0031	R36	1	RES, MF 3K32 1/4W 1%
RM0042	R31	1	RES, MF 681 ohms1/4W 1%
RM0080	R5, R11	2	RES, MF 825 ohms1/4W 1%
RM0178	R34	1	RES, MF 10K2 1/4W 1%
RM0260	R28	1	RES, MF 1M0 1/4W 1%
RM0271	R22	1	RES, MF 110K 1/4W 1%
RM0281	R8, R13	2	RES, MF 6K04 1/4W 1%
RM0315	R19	1	RES, MF 2K67 1/4W 1%
RM0369	R7, R12	2	RES, MF 340 ohms1/4W 1%
RM0370	R21	1	RES, MF 9K31 1/4W 1%

Electrical Parts List (cont.)

Part#	Reference Designator	Qty.	Description
RM0377	R18	1	RES, MF 3K57 1/4W 1%
RM0378	R23	1	RES, MF 549 ohms1/4W 1%
Capacitors			
CE0115	C4, C5	2	CAP, E 1UF 63V 6X11 85C 5MMLS
CF0045	C1, C2, C3	3	CAP, F .1UF 63DC 5% 5MMLS
Miscellaneous			
JH0061	J4	1	CNCTR, HEADER 5PIN
JH0074	J3	1	CNCTR, HEADER 8PIN LOCKING .1C
Volume PCB (Left)			
DL0014	D1	1	LED, 3MM BICOLOR RED/GR
MZ0036		1	STANDOFF, 14MM LED 2PIN (FOR D1)
RC0273	R2	1	RES, ZERO OHM 1/4W
RP0097	R1	1	POT, A10K SINGLE/BRKT D SHAFT
RX0096	R3	1	RES, MO 2K2 1W 5%
Volume PCB (Right)			
DL0014	D1	1	LED, 3MM BICOLOR RED/GR
MZ0036		1	STANDOFF, 14MM LED 2PIN (FOR D1)
RC0273	R2	1	RES, ZERO OHM 1/4W
RP0099	R1	1	POT, C10K SINGLE/BRKT D SHAFT
RX0096	R3	1	RES, MO 2K2 1W 5%
Miscellaneous			
HS0073		2	SCREW, #6-19X3/8 HL PP ZNC USED ON THE RABOS RIGHT HOUSING
HS0087		4	SCREW, #6-19X1 HL PP ZNC USED ON THE RABOS RIGHT HOUSING
JC0186		1	CNCTR, FEM-FEM HARN 8P 18" SHI TO CONNECT J3 ON RABOS TO J102 ON FEATURE
MM0075		1	MISC, RUBBER GROMMET RABOS HSG AT OPENING OF PLASTIC HOUSING FOR RIBBON CABLE.
MZ0034		4	STANDOFF, 3/8" SPACER NYLON USED ON THE VOLUME BOARD
RP0098		1	POT, KNOB INT 2.6 LEVEL RIGHT USED ON R1
810056		12	HTSNK, FET CLIP .9X.5X.2 FOR THE FETS
810066		6	HTSNK, FET CLIP HPS SERIES USED ON D407, D408, Q403, Q404, Q406, Q407 ON THE POWER BOARD
810088		1	HTSNK, BRIDGE 1X2 FOR D501 BRIDGE
810096		1	HTSNK, PRIMARY LF SERIES USED ON THE POWER BOARD
810099		1	HTSNK, DIODE LF SERIES USED ON THE POWER BOARD
930056		1	COVER, PWR SUPPLY PLASTIC 4.1
930057		1	BRACKET, INTERMEZZO 4.1M
930058		1	CUP, AMP BUCKET INTERMEZZO 4.1
930059		1	PANEL, INTERMEZZO 4.1M
FH0012		1	FUSE, HOLDER PANEL MT SEALED

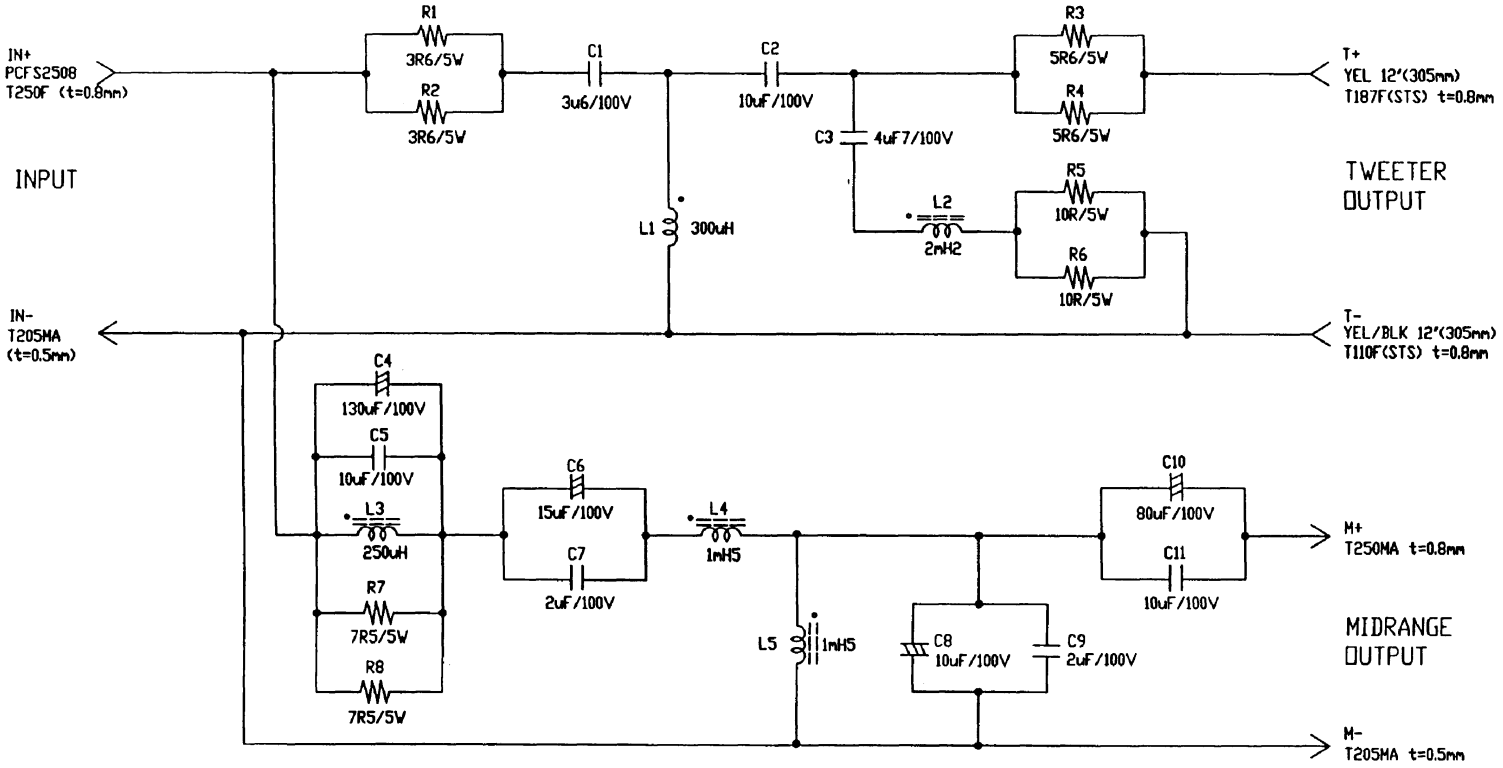
Electrical Parts List (cont.)

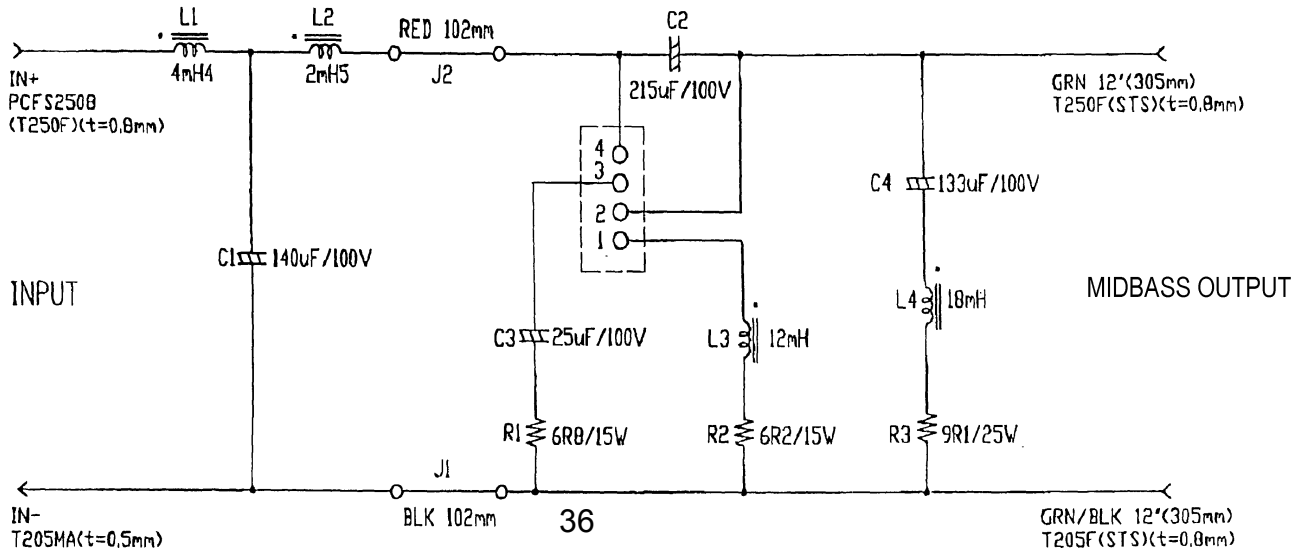
Part#	Reference Designator	Qty.	Description
FS0027		1	FUSE, 6A 250V 1.25X.25 GLASS
HN0003		1	NUT, HEX NYLON #6-32 L302 ON THE LINEAR BOARD
HN0006		9	NUT, HEX KEP #6-32 ZNP 1PC FOR BRIDGE HEATSINK; 4PC FOR THE PRIMARY AND DIODE HEATSINK; 4PC TO ATTACH METAL HEATSINK STANDOFF TO BOARD
HS0006		1	SCREW, #6-32X3/8 100 PHIL ZNP FOR BRIDGE HEATSINK
HS0047		4	SCREW, #6-32X3/4 PAN PHIL BLK TO SCREW VOLUME BOARD TO RABOS BOARD
HS0054		3	SCREW, #4-1/2 TYPE AB PP BLK 1PER FOR THE RCA JACKS; 2PER TO SECURE HIGH LEVEL INPUTS TO PANEL
HS0060		4	SCREW, #6-32X3/8 PAN PHIL BLK USED ON THE PRIMARY AND DIODE HEATSINK ON THE POWER BOARD
HS0062		12	SCREW, #6-1/2 TYPE B PP BLK ON THE FET CLIPS
HS0065		13	SCREW, #6-32X1/4 PAN PHIL BLK 4PC TO MOUNT LINEAR BOARD; 4PC TO MOUNT POWER SUPPLY; 4PC TO MOUNT FINGER PROTECTOR TO U BRACKET; 1PC F0R MM0025 ON FEATURE BOARD
HS0066		4	SCREW, #6-32X1/2 PAN PHIL BLK TO SECURE FINGER PROTECTOR TO POWER SUPPLY HEATSINK STANDOFFS
HS0067		2	SCREW, #6-3/8 TYPE A PP BLK 2PC TO SUPPORT 660035
HS0073		4	SCREW, #6-19X3/8 HL PP ZNC MOUNT EMI BOARD IN PLASTIC BUCKET
HS0079		1	SCREW, #6-32X1.25 FL SLOT NYL L302 ON THE LINEAR BOARD
HS0092		4	SCREW, #6-19X3/8 HL PP BLK TO MOUNT U BRACKET TO PLASTIC BUCKET
HS0093		2	SCREW, M3X16MM 100CS PHIL BLK TO ALIGN SR0044
HS0094		4	SCREW, #6-19X3/8 82UC TYPE B TO SECURE PANEL TO PLASTIC BUCKET
JC0071		1	CNCTR, FEM-FEM HARNESS 8PIN 9" TO CONNECT J101 ON FEATURE BD TO J301 ON LINEAR BD
JC0079		1	CNCTR, FEM-FEM HARNESS 5PIN 7" TO CONNECT J502 ON EMI BD TO J100
JC0094		1	CNCTR, 2PIN GOLD PC MT HIGH LEVEL INPUT
JC0129		1	CNCTR, AC IEC SOCKET .250 2PIN ON THE PANEL
JC0134		1	CNCTR, FEM-FEM HARNESS 5PIN 9" TO CONNECT J401 ON POWER BOARD TO J302 ON LINEAR BD
JC0180		1	CNCTR, FEM-MAL HARN 8P 18" SHI TO CONNECT J102 ON FEATURE BD TO J3 ON RABOS

Electrical Parts List (cont.)

Part#	Reference Designator	Qty.	Description
JC0182		1	CNCTR, 2PIN FEM/2XFEM FASTON TO LIVE AND NEUTRAL FROM SWITCH TO THE EMI BOARD
JC0192		1	CNCTR, FEM-MAL HARN 2P 20" #16 CONNECT TO FO101(.250) TO FO103(.205) ON FEATURE BOARD
JC0193		1	CNCTR, FEM-MAL HARN 2P 49"/30" FEMALE RECEPTACLE TO CONNECT TO MALE PLUG OF JC0192
JC0194		1	CNCTR, FEM-MAL HARN 4P 21" #18 FEMALE CRIMP TERMINAL HOUSING TO CONNECT TO J105 ON HPF SWITCH BOARD
JC0195		1	CNCTR, FEM-FEM HARN 4P 48" #18 FEMALE RECEPTACLE TO CONNECT TO MALE PLUG OF JC0194
MM0080		1	MISC, PANEL GASKET ITM4.1T TO PERIMETER OF AMP HOUSING
MS0014		1	MISC, CERAMIC PLATE TO-220 D324 ON THE LINEAR BOARD
MS0017		11	MISC, CERAMIC PLATE TO-220 Q305, Q306, Q307, Q310, Q311, Q312, Q319, Q320, Q321, U302, U303 ON THE LINEAR BOARD
MT0005		6	TERM, KWIKDISC .187 X.032 FEMA ON EACH END OF 480001 AND 480003; ON ONE END OF 480022 AND 480028
MZ0024		2	STANDOFF, .5" NYLON TO SUPPORT 660035 BOARD
MZ0041		4	STANDOFF, #6 1.5" HEX FEM-MALE TO SECURE PRIMARY AND SEC HEATSINKS. THE MALE END MUST BE FASTENED TO THE POWER BOARD.
MZ0043		2	STANDOFF, .12ID .25OD .37L PVC TO ALIGN SR0044
SR0032		1	SWITCH, ROCKER TV5 POWER
SR0042		1	SWITCH, CAP 8.8X10.5MM CYL BLK USED ON SR0044
TS0020		2	FIBREGLASS, HT210 #2AWG 6" TO SLEEVE SEC DC+ AND DC- OUTPUT OF POWER; BOARD AND DC+ AND DC- INPUT TO POWER BOARD
HS0073		2	SCREW, #6-19X3/8 HL PP ZNC USED ON THE RABOS LEFT HOUSING
HS0087		4	SCREW, #6-19X1 HL PP ZNC USED ON THE RABOS LEFT HOUSING
JC0186		1	CNCTR, FEM-FEM HARN 8P 18" SHI CONNECT J3 ON RABOS TO J102 ON FEATURE
MM0075		1	MISC, RUBBER GROMMET RABOS HSG AT OPENING OF PLASTIC HOUSING FOR RIBBON CABLE
MZ0034		4	STANDOFF, 3/8" SPACER NYLON USED ON THE VOLUME BOARD
RABOS CUP 2.6L		1	CUP, RABOS INTERMEZZO 2.6 LEFT
RP0100		1	POT, KNOB INT 2.6 LEVEL LEFT

IM 4.1t PASSIVE NETWORK SCHEMATIC DIAGRAM



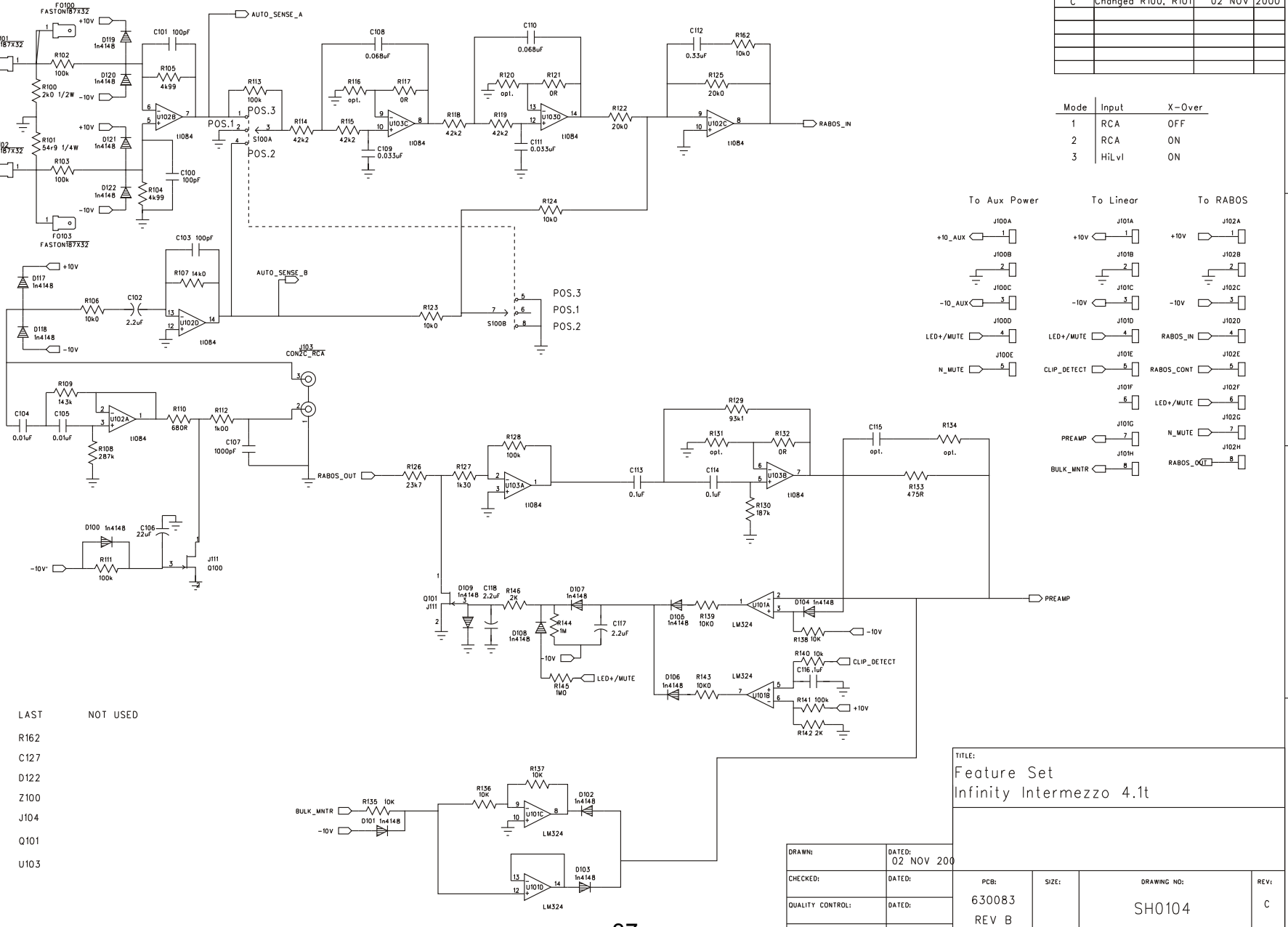


INTERMEZZO 4.1t

Infinity

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
A	First entry	15 MAY	2000
B	Added R162	31 MAY	2000
C	Changed R100, R101	02 NOV	2000

Mode	Input	X-Over
1	RCA	OFF
2	RCA	ON
3	HiLvl	ON



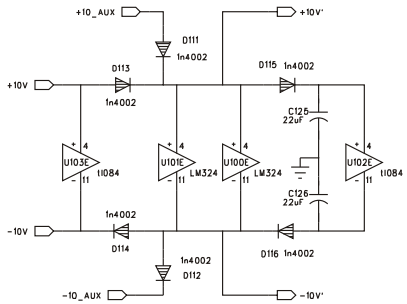
LAST NOT USED

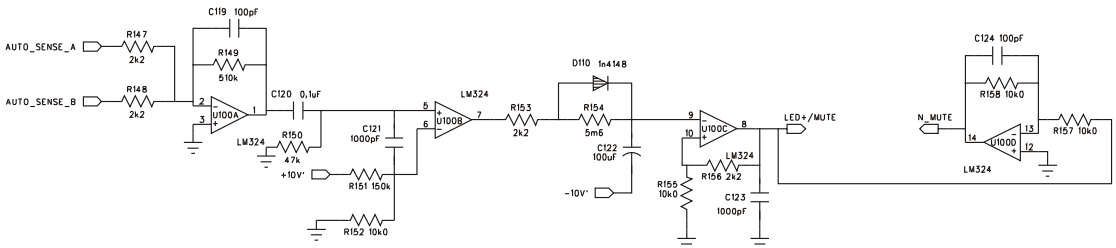
R162
C127
D122
Z100
J104
Q101
U103

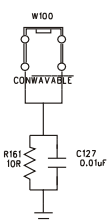
DRAWN:	DATED: 02 NOV 200	TITLE: Feature Set Infinity Intermezzo 4.1t			
CHECKED:	DATED:				
QUALITY CONTROL:	DATED:	PCB: 630083 REV B	SIZE:	DRAWING NO: SH0104	REV: C
RELEASED:	DATED:	SCALE:			

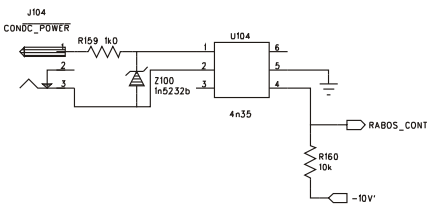
INTERMEZZO 4.1t

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
A	First entry	15 MAY	2000
B	Added R162	31 MAY	2000
C	Changed R100, R101	02 NOV	2000









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QUALITY CONTROL:	DATED:	SCALE:			
RELEASED:	DATED:				

INTERMEZZO 4.1t

REVISION RECORD			
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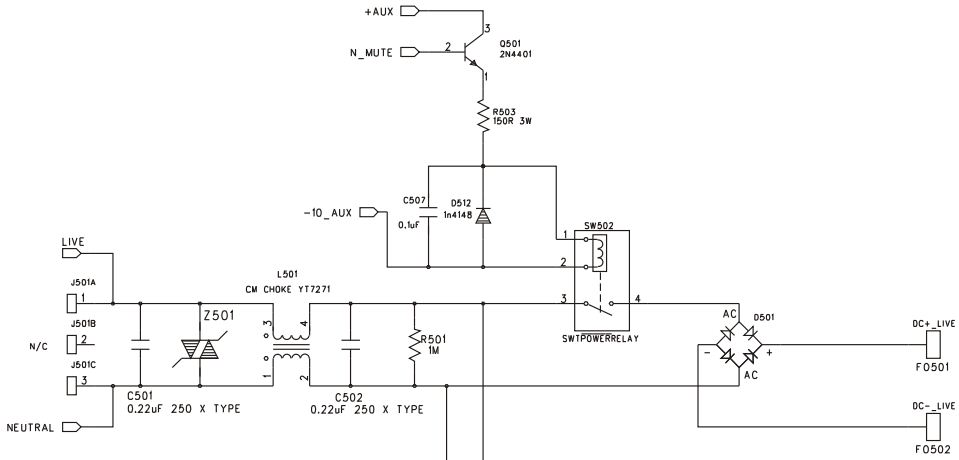
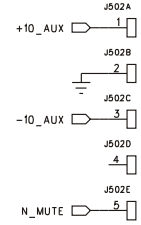
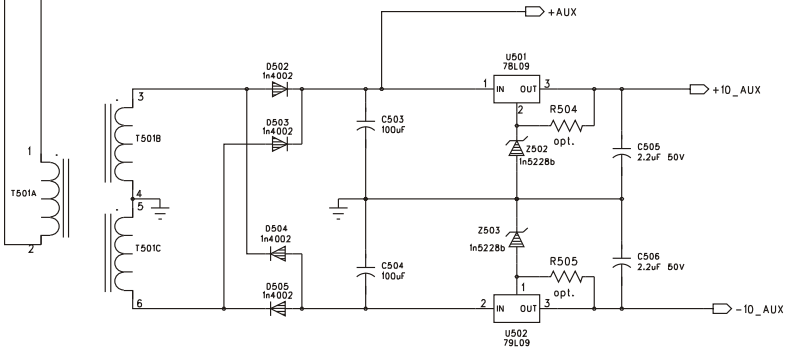
1	Moved C502 and Z501	27 NOV	2000







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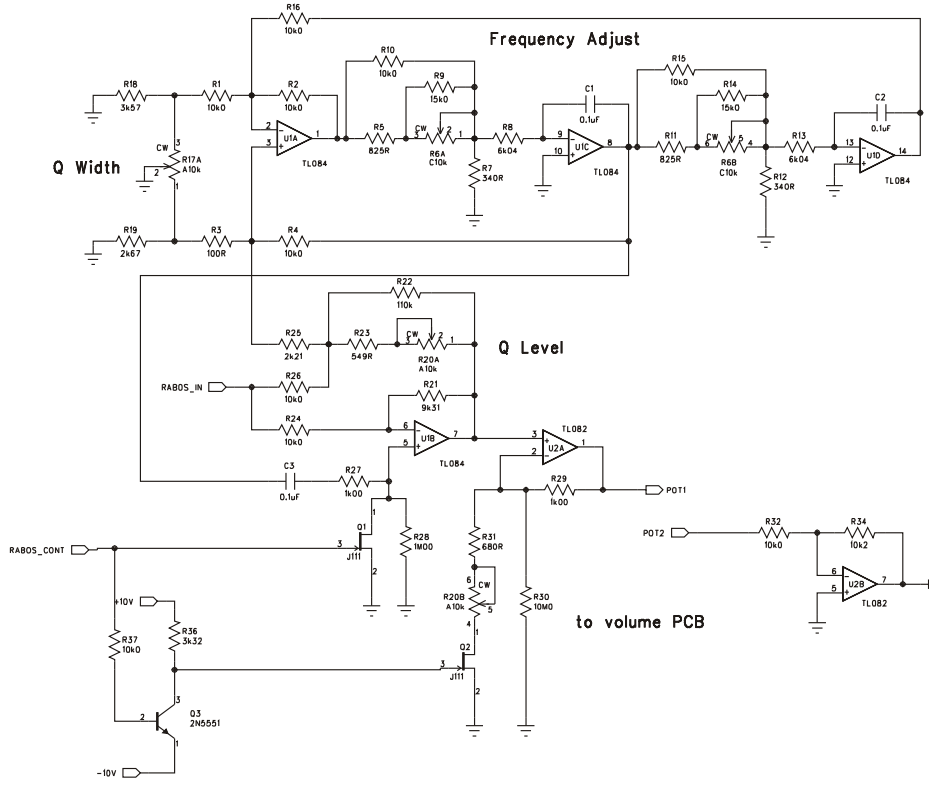
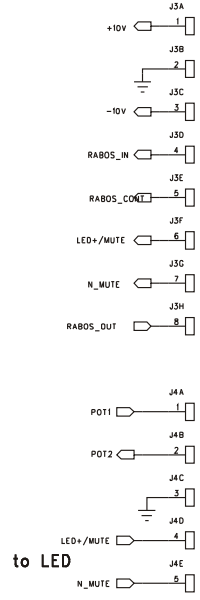
CHECKED:	DATED:
QUALITY CONTROL:	DATED:
RELEASED:	DATED:
PCB:	620011 Rev. 0
SIZE:	
DRAWING NO:	SH0103
REV:	1
SCALE:	

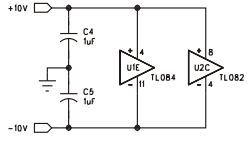
INTERMEZZO 4.1t

Infinity

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
A	Copied from ITM 2.6 Right		31 MAY 2000
B	Deleted R33, R35		31 MAY 2000
C	Matched headers to 1.2s		31 MAY 2000
D	First Sample		15 SEP 2000





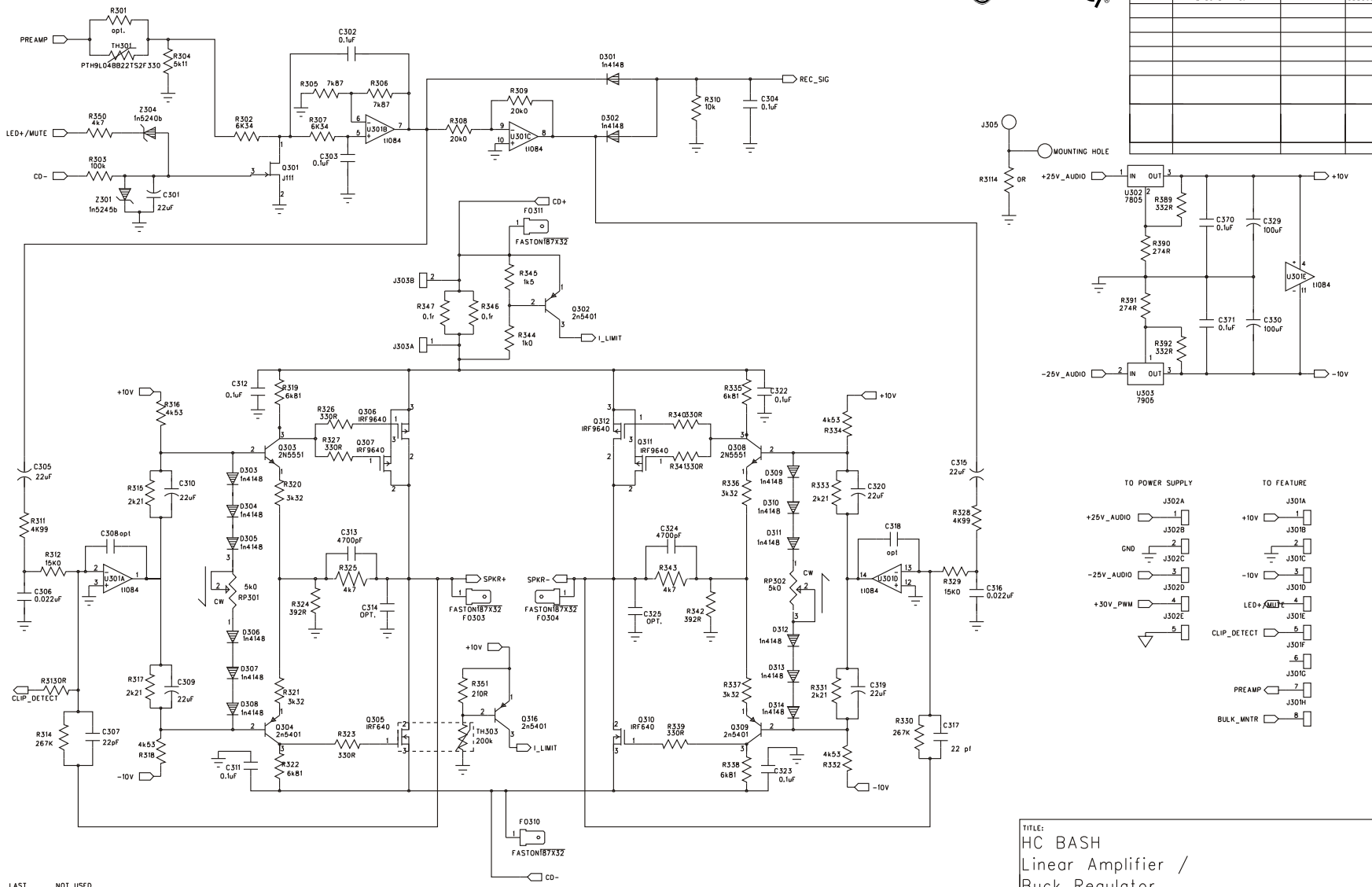


DRAWN:	DATED: 15 SEP 2000	TITLE: RABOS Main, Left & Right Infinity Intermezzo 4.1t	
CHECKED:	DATED:		
QUALITY CONTROL:	DATED:	PCB: (LEFT) 630081 REV B (RIGHT) 630082 REV B	DRAWING NO: SH0108 REV: D
RELEASED:	DATED:	SCALE:	

INTERMEZZO 4.1t

Infinity

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
A	INITIAL SCHEMATIC.		15DEC00



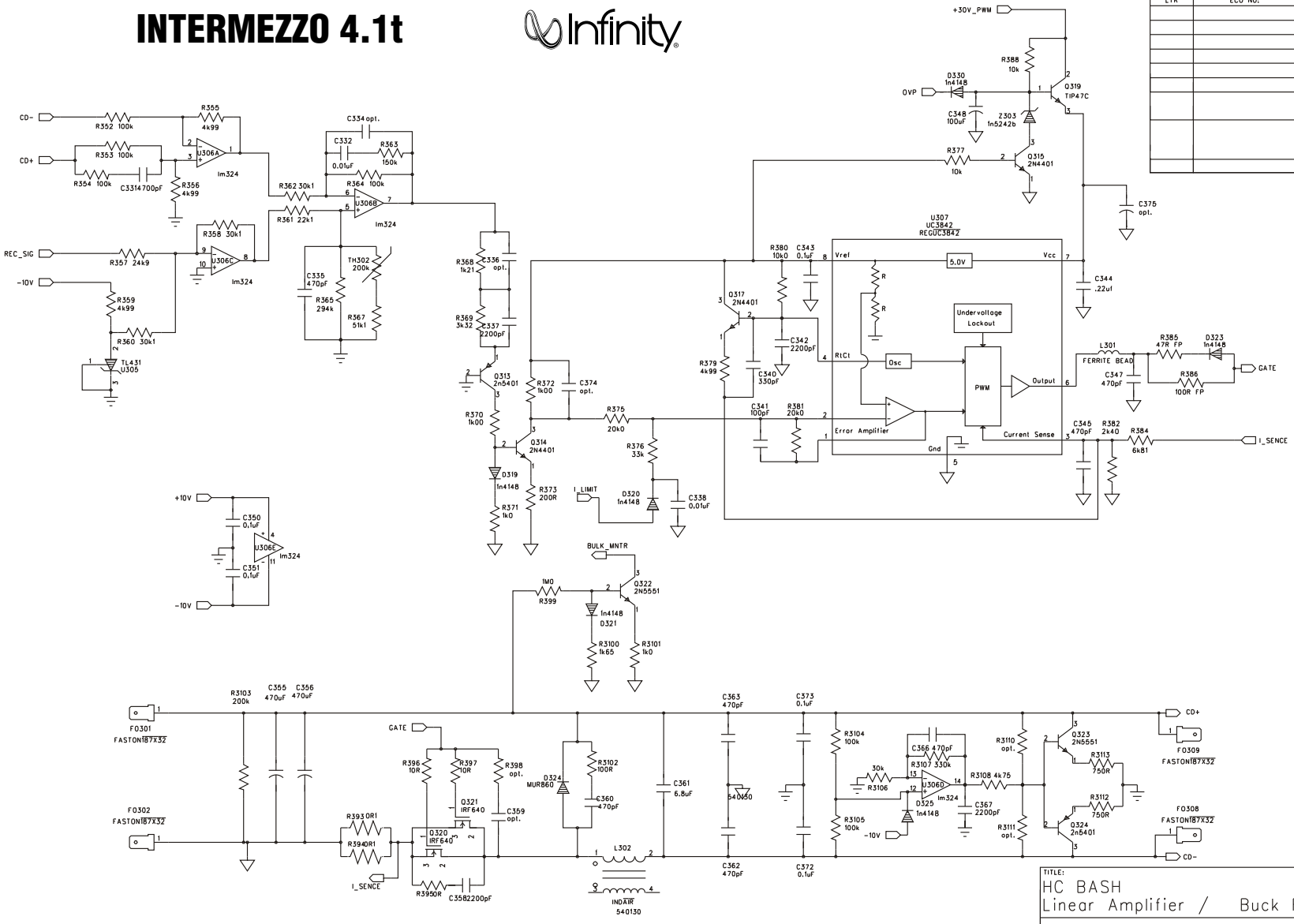
LAST	NOT USED
R3115	R366 R374 R378 R383 R387 R3109
C376	C321 C327 C328 C333 C339 C346 C349 C352-C354 C357 C364 C365 C368 C369
D330	D322 D326-D329
Q324	Q318
U307	
Z304	
TH303	
L302	
J308	J304 J306 J307

DRAWN:	DATED: 15DEC00	TITLE: HC BASH Linear Amplifier / Buck Regulator			
CHECKED:	DATED:				
QUALITY CONTROL:	DATED:	PCB: 650020 Rev. 6	SIZE:	DRAWING NO: SH0112	REV: A
RELEASED:	DATED:	SCALE:			

INTERMEZZO 4.1t

Infinity

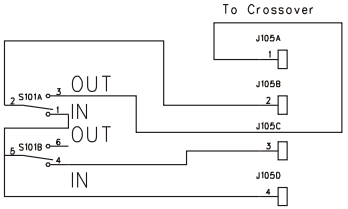
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



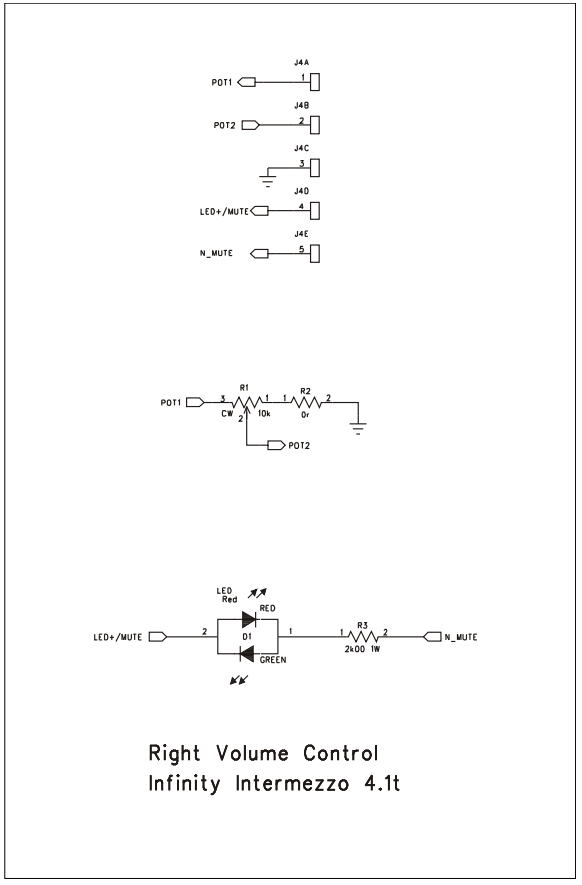
DRAWN:	DATED: 15DEC00	TITLE: HC BASH Linear Amplifier / Buck Regulator			
CHECKED:	DATED:				
QUALITY CONTROL:	DATED:				
RELEASED:	DATED:	PCB: 650020 Rev. 6	SIZE:	DRAWING NO: SH0112	REV: A
		SCALE:			

INTERMEZZO 4.1t

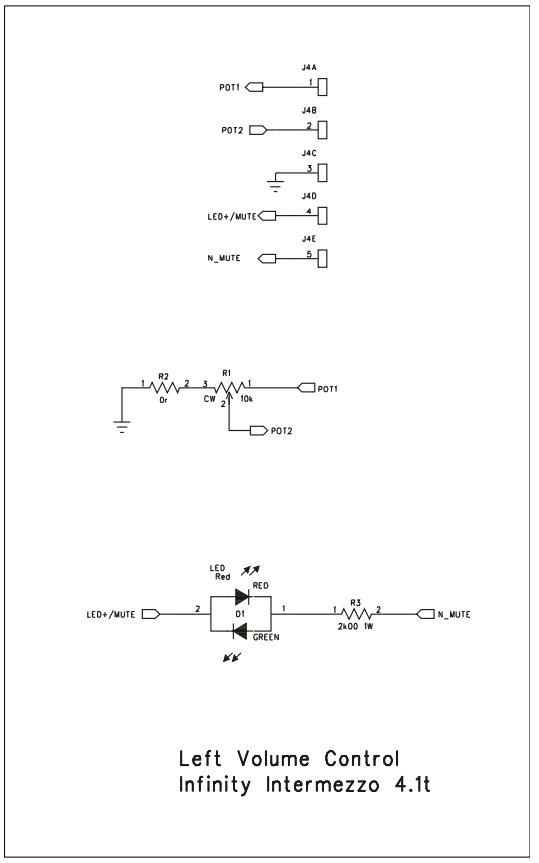
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
A	Copied from 2.6 Right		31 MAY 2000
B	Deleted D2, D3		31 MAY 2000
C	Matched headers to 1.2s		31 MAY 2000



HPF Switch
Infinity Intermezzo 4.1t



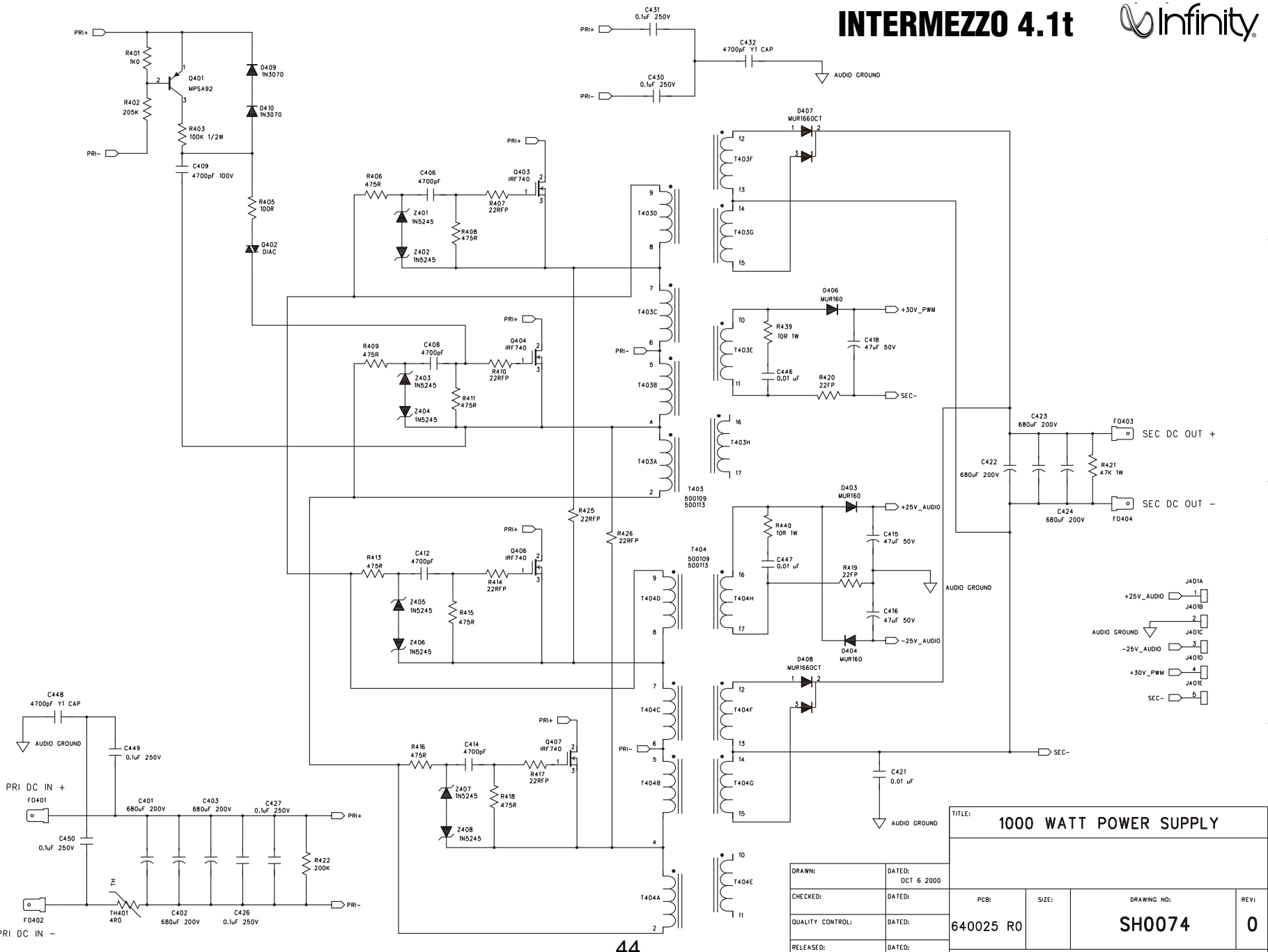
Right Volume Control
Infinity Intermezzo 4.1t



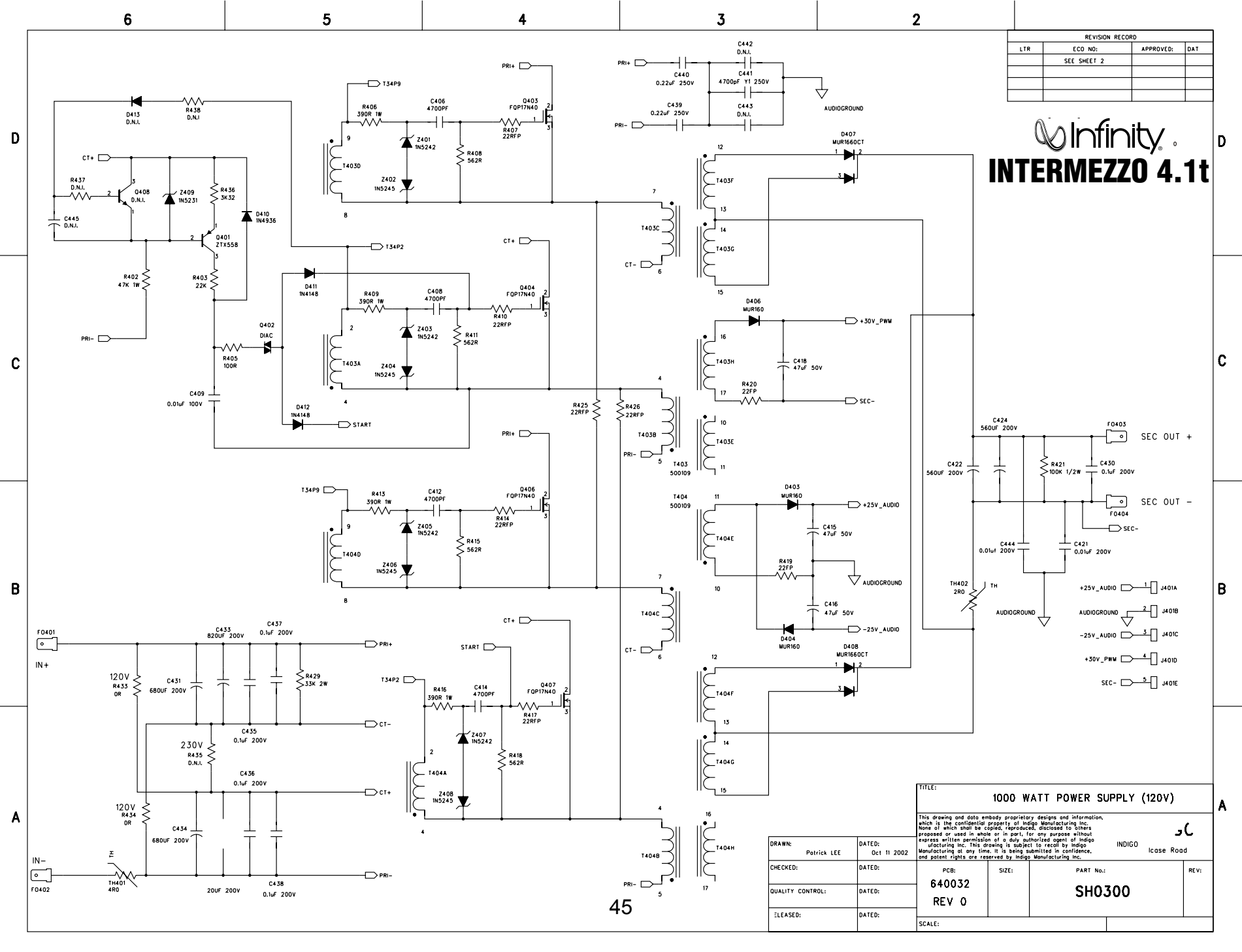
Left Volume Control
Infinity Intermezzo 4.1t

DRAWN:	DATED: 15 SEP 2000	TITLE:			
CHECKED:	DATED:	PCB: 610048 REV A	SIZE:	DRAWING NO: SH0106	REV: C
QUALITY CONTROL:	DATED:				
RELEASED:	DATED:	SCALE:			

INTERMEZZO 4.1t



DRAWN:	DATED: OCT 6 2000	TITLE: 1000 WATT POWER SUPPLY			
CHECKED:	DATED:				
QUALITY CONTROL:	DATED:	PCB: 640025 R0	SIZE:	DRAWING NO: SH0074	REV: 0
RELEASED:	DATED:	SCALE:			


REVISION RECORD
LTR | ECO NO: | APPROVED: | DAT
SEE SHEET 2
Infinity
INTERMEZZO 4.1t
1000 WATT POWER SUPPLY (120V)
DRAWN: Patrick LEE DATED: Oct 11 2002
CHECKED: DATED:
QUALITY CONTROL: DATED:
RELEASED: DATED:
PCB: 640032 REV 0
SIZE:
PART No.: SH0300
REV:
SCALE:
INDIGO
Icase Road
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T34P9
T34P2
T34P3
T34P4
T403D
T403A
T403C
T403F
T403G
T403H
T403B
T403E
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Z409 1N5231
Q401 ZTX558
Q402 DIAC
Q403 FQP17N40
Q404 FQP17N40
Q406 FQP17N40
Q407 FQP17N40
Q408 D.N.I.
D403 MUR160
D404 MUR160
D406 MUR160
D407 MUR1660CT
D408 MUR1660CT
D410 1N4936
D411 1N4148
D412 1N4148
D413 D.N.I.
R402 47K 1W
R403 22K
R405 100R
R406 390R 1W
R407 22RFP
R408 562R
R409 390R 1W
R410 22RFP
R411 562R
R412 390R 1W
R413 390R 1W
R414 22RFP
R415 562R
R416 390R 1W
R417 22RFP
R418 562R
R419 22FP
R420 22FP
R421 100K 1/2W
R425 22RFP
R426 22RFP
R429 33K 2W
R433 0R
R434 0R
R435 D.N.I.
R436 3K32
R437 D.N.I.
C406 4700PF
C408 4700PF
C409 0.01uF 100V
C412 4700PF
C414 4700PF
C415 47uF 50V
C416 47uF 50V
C418 47uF 50V
C421 0.01uF 200V
C422 560UF 200V
C424 560UF 200V
C430 0.1uF 200V
C431 680UF 200V
C433 820UF 200V
C434 680UF 200V
C435 0.1uF 200V
C436 0.1uF 200V
C437 0.1uF 200V
C438 0.1uF 200V
C439 0.22uF 250V
C440 0.22uF 250V
C441 4700pF Y1 250V
C442 D.N.I.
C443 D.N.I.
C444 0.01uF 200V
C445 D.N.I.
TH401 4R0
TH402 2R0
FO401 IN+
FO402 IN-
FO403 SEC OUT +
FO404 SEC OUT -
J401A +25V_AUDIO
J401B AUDIOGROUND
J401C -25V_AUDIO
J401D +30V_PWM
J401E SEC-
PRI+
PRI-
CT+
CT-
START
SEC-
+30V_PWM
+25V_AUDIO
-25V_AUDIO
AUDIOGROUND
120V
230V
20UF 200V
45